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ABSTRACT

The primary purpose of this study is to highlight similarities and differences among 17 computer-assisted career guidance (CACG) systems so that practitioners, CACG system developers, policy makers, and researchers may make informed decisions concerning such systems. The CACG systems in the analysis are: (1) Career Information System; (2) Career Visions; (3) Choices: (4) Choices CT; (5) Choices Jr; (6) MODULAR C-LECT; (7) C-Lect Jr.; (8) COIN; (9) COIN Jr; (10) DISCOVER for Colleges and Adults; (11) DISCOVER for High Schools; (12) DISCOVER for Junior High and Middle Schools; (13) Guidance Information System Version 17; (14) GIS II; (15) SIGI PLUS; (16) VISIONS; and (17) VISIONS PLUS. The analysis looks at features including system content, user friendliness, and support materials and services available from the developer. It also looks at costs, such as system-specific costs, and constant costs that exist irrespective of the specific system used. A secondary purpose of the study is to provide a comprehensive description of the 17 systems included in this analysis by identifying state, territory, and city-specific availability of occupational information in the CACG systems and by identifying the country location, geographic data base origin, and language for each system. Eleven tables are included. Contains four pages of references. (Author/JE)

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# A Differential Feature-Cost Analysis of Seventeen Computer-Assisted Career Guidance Systems: Technical Report Number 10

(Fifth Edition)

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**A Differential Feature-Cost Analysis of Seventeen Computer-Assisted Career Guidance Systems: Technical Report Number 10 (5th Ed.)**

**Abstract**

The primary purpose of this study is to highlight similarities and differences among seventeen computer-assisted career guidance (CACG) systems so that practitioners, CACG system developers, policy makers, and researchers may make informed decisions concerning such systems. The specific CACG systems included in this analysis are: 1) the Career Information System (University of Oregon, 1993), 2) Career Visions (University of Wisconsin-Madison, 1994), 3) Choices (Careerware: ISM Systems Corporation, 1993), 4) Choices CT [for Adults in Career Transitions (Careerware: ISM Systems Corporation, 1993)], 5) Choices Jr [for Junior High and Middle Schools (Careerware: ISM Systems Corporation, 1993)], 6) MODULAR C-LECT (Chronicle Guidance Publications, Inc., 1993), 7) C-Lect Jr. (Chronicle Guidance Publications, Inc., 1993), 8) COIN (COIN Educational Products, 1993), 9) COIN Jr [for Junior High and Middle Schools (COIN Educational Products, 1993)], 10) DISCOVER for Colleges and Adults (American College Testing Program, 1993), 11) DISCOVER for High Schools (American College Testing Program, 1993), 12) DISCOVER for Junior High and Middle Schools (American College Testing Program, 1993), 13) Guidance Information System Version 17 (Riverside Publishing Company, 1993), 14) GIS II (Guidance Information System) (Riverside Publishing Company, 1993), 15) SIGI PLUS (Educational Testing Service, 1993), 16) VISIONS (American College Testing Program, 1993), and 17) VISIONS PLUS (American College Testing Program, 1993). For the purposes of this analysis, features include: 1) system content, 2) user friendliness, and 3) support materials and services available from the developer, while costs include: 1) system-specific costs, and 2) constant costs that exist irrespective of the specific system used. The data presented in this analysis were gathered from CACG software use, support materials provided by the developers, and telephone interviews with the developers. The integration of differential feature-cost analyses into the process of software selection is also discussed. A secondary purpose of this study is to provide a comprehensive description of the seventeen CACG systems included in this analysis by identifying state, territory, and city-specific availability of occupational information in the CACG systems and by identifying the country location, geographic data base origin, and language for each system.

## Background

Computer-assisted career guidance (CACG) systems have become one of the most common comprehensive counseling and guidance resources.[1] For the purposes of this paper, a computer-assisted career guidance (CACG) system is defined as

> a system of interrelated computer-based components designed to facilitate self-assessment, the generation of occupational and educational alternatives, and the use of occupational, educational, and employment information. Such systems are often coupled with counseling interventions and various print and media-based support resources, and are used within an organization to assist individuals in making current career decisions as well as improving their capacity to make effective career decisions in the future (Sampson, 1994a).

An essential element in evaluating the appropriateness of potential systems involves an analysis of data on the effectiveness of CACG systems with different populations using various counselor intervention strategies. The process of completing research and evaluation studies is, however, a time-consuming process. It is not at all unusual to have research appear in the literature on CACG system versions that are no longer available. CACG systems are also dynamic, in that revised or entirely new versions of software appear regularly in response to user feedback and theoretical advances, as well as innovations in computer software and hardware. [See Reardon, Sampson, Ryan-Jones, Peterson, and Shahnasarian (1988), for a discussion of the comparability of different versions of a single CACG system]. These two problems, the time lag in publishing research and evaluation studies and the rapid evolution of CACG systems, necessitate a multidimensional approach to the software evaluation process.

The use of a differential feature-cost analysis offers a potential solution to the above problems. A differential feature-cost analysis allows the comparison of two or more CACG systems in terms of the features available with respect to the costs involved. Gati (1990) stated, "a feature analysis of the systems may be used to eliminate a particular system because of the presence (or absence) of a critical undesirable (or necessary) feature" (p. 122). For the purposes of this analysis, features include 1) system content, 2) user friendliness, and 3) support materials and services available from the developer, while costs include: 1) system specific costs, and 2) constant costs that exist irrespective of the specific system used. Because this type of analysis is limited to features and costs, both of which are known at the time software is released, the findings can be made available in a very timely fashion.

A differential feature-cost analysis is best integrated into the planning phase of the implementation process within an organization (Sampson, 1984) as follows:

1) Assess current client and organizational needs;

2) Briefly review a differential feature-cost analysis to become familiar with available features;

3) Weigh the importance of various features (Gati, 1990; Krumboltz, 1990; Oliver, 1990) and cross out features that are not relevant in light of client and organizational needs (Oliver, 1990) and cross out features that are constant across systems (all receiving a "yes") (Jepsen, 1990);

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[1] See Sampson and Reardon (1991) for a general examination of trends and problems associated with CACG design and use, and Sampson (1994b) for an exploration of factors that facilitate and inhibit the design and use of CACG systems. Comprehensive recommendations for improving the design and use of CACG systems have been proposed for North America (Sampson, Reardon & Lenz, 1991) and for Europe (Banks & Watts, 1990). Bibliographies are available that address CACG general issues (Sampson & Reardon, 1993a) and CACG ethical issues (Sampson, 1993).

4) Review a differential feature-cost analysis to identify CACG systems that have the potential to meet client needs within the context of the goals, theoretical orientation, staff, and financial resources of the organization;

5) Evaluate the software identified in the previous step in terms of potential effectiveness in meeting current client and organizational needs by having staff actually use the software, reviewing support materials from the developer, reviewing documents that describe system use and evaluate system effectiveness, discussing system use with staff and clients from other organizations, and temporarily using the system with actual clients;[2] and

6) Evaluate the remaining software in terms of costs (Maze, 1985) and available financial resources (Krumboltz, 1990).

"The interaction of CACG system features and costs with varied client populations and organizational variables, is too complex to allow one "best" system to exist for all situations (Sampson & Reardon, 1990, p. 146). As a result, the task of the practitioner is to ask the question: "Given our client population, organizational structure, financial resources, staff (time and skills), and historical/theoretical approach to service delivery, which CACG system provides the features that we need at an acceptable cost, and has been shown to be effective for clients under these operating conditions?" (Sampson & Reardon, 1990, p. 146).

**Purposes of the Study**

The primary purpose of this study is to highlight similarities and differences among seventeen computer-assisted career guidance systems, so that practitioners may make more informed decisions concerning the adoption of such systems, CACG system developers may more systematically present information about their software, policy makers may monitor the developing scope of system features and costs, and researchers may more fully describe CACG treatment interventions in their studies. The specific CACG systems included in this analysis are: 1) the Career Information System (University of Oregon, 1993), 2) Career Visions (University of Wisconsin-Madison, 1994), 3) Choices (Careerware: ISM Systems Corporation, 1993), 4) Choices CT [for Adults in Career Transitions (Careerware: ISM Systems Corporation, 1993)], 5) Choices Jr [for Junior High and Middle Schools (Careerware: ISM Systems Corporation, 1993)], 6) MODULAR C-LECT (Chronicle Guidance Publications, Inc., 1993), 7) C-Lect Jr. (Chronicle Guidance Publications, Inc., 1993), 8) COIN (COIN Educational Products, 1993), 9) COIN Jr [for Junior High and Middle Schools (COIN Educational Products, 1993)], 10) DISCOVER for Colleges and Adults (American College Testing Program, 1993), 11) DISCOVER for High Schools (American College Testing Program, 1993), 12) DISCOVER for Junior High and Middle Schools (American College Testing Program, 1993), 13) Guidance Information System Version 17 (Riverside Publishing Company, 1993), 14) GIS II (Guidance Information System) (Riverside Publishing Company, 1993), 15) SIGI PLUS (Educational Testing Service, 1993), 16) VISIONS (American College Testing Program, 1993), and 17) VISIONS PLUS (American College Testing Program, 1993). A secondary purpose of this study is to provide a more comprehensive description of the seventeen CACG systems included in this analysis, by identifying state, territory, and city-specific availability of occupational information in the CACG systems and by identifying the country location, geographic data base origin, and language for each system.

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[2] See Bridges (1987), Forrer (1987), Maze (1984), Maze (1989), Maze and Cummings (1982), National Career Development Association (1991), and Riesenberg (1984) for detailed descriptions of the software evaluation process. Also see the Association of Computer-Based Systems of Career Information (1992), Caulum and Lambert (1985), American Association for Counseling and Development (1988), the National Career Development Association (1988), the National Board for Certified Counselors (1989), and the American Psychological Association (1986) for national standards on the development and use of CACG systems.

## Methodology

### CACG System Selection Criteria

The following criteria were used in selecting CACG systems for inclusion in this analysis: 1) Provision of system components that address self-assessment, the generation of occupational alternatives, and the delivery of occupational information; and 2) Use as a computer-based career information delivery system in more than one state, territory, or city; or 3) Use in more than 500 sites in the United States.

### Establishment of Features and Costs

Bloch and Kinnison (1989), Harris-Bowlsbey (1983a; 1983b; 1984; 1985), Heppner and Johnston (1985), Katz and Shatkin (1983), and McKinlay (1984) suggested features which were used to develop system content criteria. The criteria for user friendliness were taken from the evaluation standard developed by Sampson and James (1984) as well as features described by Heppner and Johnston (1985) and Bloch and Kinnison (1989). The criteria for support materials and services available from developers were derived by the authors via discussions with system developers. Cost criteria were taken from Maze (1985) and discussions with system developers.

This is the fifth edition of CACG system feature-cost analyses completed at Florida State University. With each subsequent edition, additional CACG systems and features have been added. By adding additional CACG systems, as suggested by Garcia and Plansker (1990), the analysis more accurately reflects the current range of career guidance practice. In the process of analyzing each CACG system for this study, the authors chose to add new features to the analysis, and to subdivide earlier feature categories to better reflect the contents of the seventeen systems.

### Procedures

A eleven member research team was assembled to conduct this analysis. The research team met to review the previous feature-cost analysis and the purposes of the present research. Each member of the research team agreed to be the lead researcher for one or more systems. Each lead researcher used the features associated with their respective system(s) and reviewed support materials available from the CACG system developer(s). Telephone contacts were used to clarify specific questions related to features. The research team then met as a group several times to discuss common criteria for features and to suggest the addition of new features or the deletion of previous features. In situations where different terminology was used by developers to represent similar features, a "/" mark was used to combine terms, e.g., work tasks/activities. After data collection was completed, a second researcher independently verified the accuracy of the data recorded by the lead researcher. After all feature tables were complete, one researcher compiled cost data from telephone contacts with developers or their representatives. A draft of the report was then sent to the developers of each system to identify factual errors and discuss the criteria for receiving a "yes" or "no" for specific features in question. Factual errors were then corrected and developer comments were taken into consideration by the authors in completing the analysis. The authors assume responsibility for the quality of the analysis and related interpretations that are included in this study.

### Limitations

While every attempt has been made to be accurate, the reader should be aware of the inherent limitations of any methodology. First, the following analysis does not examine the effectiveness or desirability of the features identified for the seventeen systems. In considering effectiveness, Jepsen (1990) stated:

> The vast amount of information included in the findings [3rd Edition of this feature-cost-analysis] required some simplification. But the mere presence of a feature as part of any complex system does not assure its effectiveness. By analogy one would not always buy the auto with the most "whistles and bells" rather than the one where the whistles actually made a difference, as the warning devices telling the operator that the door is ajar or the

> signal that your turning light is flashing. Many competing sounds are a nuisance rather than a help. Likewise, too many CACG features are not necessarily a sign of system strength (p. 130).

Krumboltz (1990) noted a similar caution when he stated:

> For example, it is reported that there are videotapes for counselor training available in five out the nine systems under review [3rd Edition of this feature-cost-analysis]. A mechanical use of these guidelines would give an equal weight to each of the five programs for having such a videotape. However, some of these videotapes must be superior to others in their creative artistry, their ability to communicate effectively and their ability to maintain viewer interest. The existence of a videotape could be an advantage or a disadvantage depending on the quality of the tape itself. Similarly, each of the other features might be executed to different standards of excellence (p. 134).

With respect to desirability, Gati (1990) cautions that CACG features initially perceived as desirable may actually, upon more critical reflection, be judged as unnecessary or detrimental in relation to good career guidance practice. In view of the variability in both the effectiveness and desirability of various features, the reader is strongly encouraged to examine the CACG research and evaluation literature to ascertain the relative merit of these features. In order to help individuals locate appropriate literature on system design and performance, system developers often provide system-specific bibliographies upon request. Additional system-specific bibliographies are available as follows: Choices (Sampson & Reardon, 1993b), DISCOVER (Sampson & Reardon, 1993c), and SIGI PLUS (Sampson & Reardon, 1993d).

A second limitation involves the use of a "checklist" approach in presenting the data. In an effort to present feature data in a succinct manner, a dichotomous yes - no "checklist" comparison of systems was used, i.e. "Feature X: Does System A have it? Does System B?" This approach effectively simplified a massive amount of data. However, potential problems occur when this methodology oversimplifies and obscures reality. Certain features cannot be adequately explained by this "yes" - "no" analysis. For example, the checklist indicates that System A handles "understanding life-career roles" and System B does not, while System B handles "issues related to child care" but System A does not. These statements may be true, but not fully informative. The real point in these examples is that where System A concentrates more on general concepts, System B offers more specific information on coping with new life-career roles. The decision as to which approach is "best" depends on typical client needs in a particular setting as well as the theoretical orientation and assumptions of staff members.

Also related to the limitation of using a "checklist" approach, the awarding of a "no" for any given system feature is not necessarily "bad" and the awarding of a "yes" for any given system feature is not necessarily "good." In some cases a "no" may not indicate the lack of a relevant system feature. For example, if a system is not designed to use function keys, then a "yes" for having an introductory orientation to function keys is irrelevant. Conversely, a "yes" may not indicate the presence of a relevant system feature. For example, if the system uses a conceptual schema for organizing the world-of-work that a professional views as inappropriate, then a "yes" for this system feature is irrelevant.

Oliver (1990) noted that the checklist approach taken in this feature-cost analysis, "is a tool to be used in evaluating a CACG system for a specific population. Totaling the "yes" and "no" items does not constitute an evaluation in and of itself" (p. 139). Therefore, this comparative analysis is not a "score sheet," but a preliminary guide for further detailed consideration about whether a

particular feature is important for a given clientele. It is hoped that although this method may blur a few trees, it can provide a useful map of the forest.[3]

## Results

The original feature-cost analysis of SIGI PLUS and DISCOVER for Adult Learners (Sampson, Peterson, Domkowski & Reardon, 1986) had 137 feature items. The first (Sampson, Peterson, Reardon, Evans, & Domkowski, 1989), second (Sampson et al., 1989), third (Sampson et al., 1990), and fourth (Sampson et al., 1993) editions of subsequent feature-cost analyses had 353, 424, and 647 items, respectively, while the present analysis includes 540 items for the high school/college and adult systems and 162 items for the junior high/middle school systems. Not only have developers of CACG systems added features, but the inclusion of additional systems with distinct features in the analysis has also dramatically increased the number of features used in this review.

The results of the analysis are provided in a series of Tables. Tables 1 through 4 provide data on 12 CACG systems used in high school, college, employment service, vocational-technical school, library, rehabilitation, correctional, and military settings: Table 1 includes system content; Table 2 includes user friendliness; Table 3 includes support materials and services available from the developer; and Table 4 includes costs. Tables 5 through 8 provide a similar sequence of data on 5 CACG systems used in junior high/middle school settings. Table 9 identifies state, territory, and city-specific availability of occupational information in the CACG systems, including official governmental designation as a computer-based career information delivery system (CIDS).[4] Table 10 identifies the country location, geographic data base origin, and language for the CACG systems included in this report. Table 11 provides the addresses and phone numbers of CACG system developers to assist the reader in continuing the evaluation process.

## Discussion

In drawing conclusions from Tables 1 through 8, it is important to consider the following caveats. First, CACG system features vary considerably in perceived importance among practitioners, CACG system developers, policy makers, and researchers. The capacity to identify occupational alternatives by different key variables, the inclusion of different categories of occupational and educational information, or the inclusion of an integrated decision-making process that guides an individual's use of the system, could each be valued very differently among professionals. Second, CACG system costs vary considerably according to base price and pricing structure. Variations in discounts for leasing more than one copy of the software, discounts for

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[3] For further discussion of methodological issues, see Garcia and Plansker (1990), Gati (1990), Jepsen (1990), Krumboltz (1990), and Oliver (1990) for critical reviews of the third edition of this feature-cost analysis (Sampson, Reardon, Humphreys, Peterson, Evans, & Domkowski, 1990) and Sampson and Reardon (1990b) for a rejoinder and a discussion of implications for practitioners, researchers, CACG system developers, and public policy makers. While acknowledging the value of adding more qualitative, outcome-oriented judgments to increase the utility of this analysis for software selection, such an effort is beyond the practical scope and resources available for this study. The present analysis is intended to provide a foundation for subsequent, more comprehensive evaluations of CACG systems.

[4] Lester and Ollis (1988) defined CIDS as, "computer-based resources that provide information on occupations and related education and training opportunities" (p. 205). Hopkins, Kinnison, Morgenthau, and Ollis (1992) stated that CIDS, "provide useful information for people who are exploring, planning, or making decisions about careers. CIDS contain national, state, and local information about occupations, educational and training institutions and programs, and related subjects. . . . Most of these systems are computer-based, but other media are also used to provide information. Tabloid newspapers and telephone hotlines, for example, can reach people in areas without access to computerized systems" (p. 1).

multi-year leases, the option for using software on multiple computers at one institution at no additional cost, multiple institution software discounts, state-wide software discounts, and unit costs of nonconsumable and consumable support materials may have considerable impact on the ultimate costs over time. Decisions regarding CACG system adoption should be based on a careful analysis of the interaction of features, costs, and the context for implementation of the system. The context for implementation could include the mission of the organization, theoretical assumptions of counseling and guidance, staff competencies, and the size of the organization. The findings of this report can be a starting point for making decisions about CACG adoption.

As shown in Table 9, ten of the seventeen CACG systems examined in this study provide state-specific occupational information. In many cases, State Occupational Information Coordinating Committees (SOICCs) have recognized the efforts of a CACG system developer to provide state-specific information by designating a CACG system as the official CIDS for that state (or territory/city). Even when a SOICC has recognized one system, in some cases other CACG system developers have still made the effort to provide state-specific information. It appears that several CACG system developers have made a strong commitment to providing state-specific information in a variety of states.

Table 10 indicates that the use of the seventeen CACG systems included in this analysis is beginning to spread beyond the original countries of origin. It would appear that CACG systems are gradually becoming an international resource for the delivery of career guidance services. The international availability of CACG systems and CACG system data bases has the potential to further encourage the development of a global economy by facilitating the education, training, and employment of individuals across national borders.

## Conclusion

Hopefully, by making it easier to examine the features and costs of CACG systems, professionals will be both better motivated and more capable of dealing with the complex evaluative considerations that undergird the selection of CACG systems for specific purposes and settings. The ultimate effectiveness of this feature-cost analysis, therefore, can be measured by the willingness of professionals to commit the time and energy to move beyond basic surface-level evaluations to more theory-based, context-specific, comprehensive evaluations of CACG system performance. The ultimate beneficiaries of such an effort would be the millions of adolescents and adults who seek assistance each year in making career choices (Sampson & Reardon, 1990).

## References

American Association for Counseling and Development. (1988). Ethical Standards. Alexandria, VA: Author.

American College Testing Program. (1993). DISCOVER for Colleges and Adults [Computer program]. Hunt Valley, MD: Author.

American College Testing Program. (1993). DISCOVER for High Schools [Computer program]. Hunt Valley, MD: Author.

American College Testing Program. (1993). DISCOVER for Junior High & Middle Schools [Computer program]. Hunt Valley, MD: Author.

American College Testing Program. (1993). VISIONS (for Junior High and Middle Schools) [Computer program]. Hunt Valley, MD: Author.

American College Testing Program. (1993). VISIONS Plus [Computer program]. Hunt Valley, MD: Author.

American Psychological Association. (1986). Guidelines for computer-based tests and interpretations. Washington, DC: Author.

Association of Computer-Based Systems for Career Information. (1992). Handbook of standards for the operation of computer-based career information systems. Alexandria, VA: Author, ACSCI Administrative Office, National Career Development Asociation.

Banks, J. A. G., & Watts, A. G. (1990). Conclusions and recommendations. In J. P. Sampson, Jr. & R. C. Reardon (Eds.), Enhancing the design and use of computer-assisted career guidance systems: Proceedings of an international teleconference on technology and career development (pp. 110-112). Alexandria, VA: National Career Development Association.

Bloch, D. P., & Kinnison, J. F. (1989). A method for rating computer-based career information delivery systems. Measurement and Evaluation in Counseling and Development, 21, 177-187.

Bridges, M. (1987). Resources to find and evaluate counseling software. Career Planning and Adult Development Journal, 3(2), 34-42.

Careerware: ISM Systems Corporation. (1993). Choices [Computer program]. Ottawa, Ontario: Author.

Careerware: ISM Systems Corporation. (1993). Choices CT (for Adults in Career Transitions) [Computer program]. Ottawa, Ontario: Author.

Careerware: ISM Systems Corporation. (1993). Choices Jr (for Junior High and Middle Schools) [Computer program]. Ottawa, Ontario: Author.

Caulum, D., & Lambert, R. (Eds.). (1985). Guidelines for the use of computer-based career information and guidance systems. Eugene, OR: Association of Computer-Based Systems for Career Information, University of Oregon.

Chronicle Guidance Publications, Inc. (1993). C-LECT Jr. [Computer program]. Moravia, NY: Author.

Chronicle Guidance Publications, Inc. (1993). MODULAR C-LECT [Computer program]. Moravia, NY: Author.

COIN Educational Products (1993). COIN [Computer program]. Toledo, OH: Author.

COIN Educational Products (1993). COIN JR. (for Junior High and Middle Schools) [Computer program]. Toledo, OH: Author.

Educational Testing Service. (1993). SIGI PLUS [Computer program]. Princeton, NJ: Author.

Forrer, S. E. (1987). Evaluating career development software. Career Planning and Adult Development Journal, 3(2), 31-33.

Garcia, G., Jr., & Plansker, C. M. (1990). A reaction to an analysis of nine computer-assisted career guidance systems. Journal of Career Development, 17, 113-117.

Gati, I. (1990). The contribution of differential feature-cost analysis to the evaluation of computer-assisted career guidance systems: A comment on Sampson, Reardon, Humphreys, Peterson, Evans, and Domkowski (1990). Journal of Career Development, 17, 119-128.

Harris-Bowlsbey, J. (1983a). The computer and the decider. The Counseling Psychologist, 11, 9-14.

Harris-Bowlsbey, J. (1983b). A historical perspective. In C. S. Johnson (Ed.), Microcomputers and the school counselor (pp. 1-16). Alexandria, VA: American School Counselor Association.

Harris-Bowlsbey, J. (1984). The computer and career development. Journal of Counseling and Development, 63, 145-148.

Harris-Bowlsbey, J. (1985). Systematic career guidance and computer-based systems. In Z. B. Leibowitz, & H. D. Lea (Eds.), Adult career development: Concepts, issues and practices (pp. 95-107). Alexandria, VA: American Association for Counseling and Development.

Heppner, M. J., & Johnston, J. A. (1985). Computerized career guidance and information systems: Guidelines for selection. Journal of College Student Personnel, 26, 156-163.

Hopkins, V., Kinnison, J., Morgenthau, E., & Ollis, H. (1992). Career information delivery systems: A summary status report (NOICC Occasional paper No. 4). Washington, D.C.: National Occupational Information Coordinating Committee.

Jepsen, D. A. (1990). A useful but limited consumer's guide. Journal of Career Development, 17, 129-132.

Katz, M. R., & Shatkin, L. (1983). Characteristics of computer-assisted guidance. The Counseling Psychologist, 11(4), 15-31.

Krumboltz, J. D. (1990). Evaluating computer-assisted career guidance programs. Journal of Career Development, 17, 133-136.

Lester, J. N., & Ollis, H. T. (1988). Future challenges to career information providers: A NOICC perspective. Journal of Career Development, 14, 205-215.

Maze, M. (1984). How to select a computerized guidance system. Journal of Counseling and Development, 63, 158-161.

Maze, M. (1985). How much should a computerized guidance program cost? Journal of Career Development, 12, 157-160.

Maze, M. (1989). How to evaluate and select software. In G. R. Walz, J. C. Bleuer, & M. Maze (Eds.), Counseling software guide: A resource for the guidance and human development professions (pp. 5-7). Alexandria, VA: American Association of Counseling and Development.

Maze, M., & Cummings, R. (1982). How to select a computer-assisted career guidance system. Madison, WI: University of Wisconsin, Wisconsin Vocational Studies Center.

McKinlay, B. (1984). Standards of quality in systems of career information. Journal of Counseling and Development, 63, 149-152.

National Board for Certified Counselors. (1989). Code of Ethics. Alexandria, VA: Author.

National Career Development Association. (1988). Ethical standards. In The professional practice of career counseling and consultation: A resource document (pp. 11-17). Alexandria, VA: Author.

National Career Development Association. (1991). Career software review guidelines. Alexandria, VA: Author.

Oliver, L. W. (1990). Evaluating computer-assisted career guidance systems: A critique of the differential feature-cost approach. Journal of Career Development, 17, 137-141.

Reardon, R. C., Sampson, J. P., Jr., Ryan-Jones, R. E., Peterson, G. W., & Shahnasarian, M. (1988). A comparative analysis of the impact of two generations of a computer-assisted career guidance system - SIGI and SIGI PLUS (Technical Report No. 7). Tallahassee, FL: Florida State University, Center for the Study of Technology in Counseling and Career Development.

Riesenberg, B. (1984). Considerations in the selection of a computerized guidance system. In C. S. Johnson (Ed.), Microcomputers and the school counselor (pp. 17-29). Alexandria, VA: American School Counselor Association.

Riverside Publishing Company. (1993). GUIDANCE INFORMATION SYSTEM Version 17 [Computer program]. Cambridge, MA: Author.

Riverside Publishing Company. (1993). GIS II (GUIDANCE INFORMATION SYSTEM) [Computer program]. Cambridge, MA: Author.

Sampson, J. P., Jr. (1984). Maximizing the effectiveness of computer applications in counseling and human development: The role of research and implementation strategies. Journal of Counseling and Development, 63, 187-191.

Sampson, J. P., Jr. (1993). Ethical issues bibliography. Tallahassee, FL: Florida State University, Center for the Study of Technology in Counseling and Career Development. (ERIC Document Reproduction Service No. ED 363 820)

Sampson, J. P., Jr. (1994a). Effective computer-assisted career guidance: Occasional paper number 2. Tallahassee, FL: Florida State University, Center for the Study of Technology in Counseling and Career Development.

Sampson, J. P., Jr. (1994b). Factors influencing the effective use of computer-assisted careers guidance: The North American experience. British Journal of Guidance & Counseling, 22, 91-106.

Sampson, J. P., Jr., & James, J. E. (1984). Human factors evaluation standard. Unpublished manuscript, Florida State University, Clearinghouse for Computer-Assisted Guidance Systems, Tallahassee, FL.

Sampson, J. P., Jr., Peterson, G. W., Domkowski, D., & Reardon, R. C. (1986). A differential feature-cost analysis of DISCOVER for Adult Learners and SIGI PLUS (Technical Report No. 4). Tallahassee, FL: Florida State University, Clearinghouse for Computer-Assisted Guidance Systems. (ERIC Document Reproduction Service No. ED 272 679)

Sampson, J. P., Jr., Peterson, G. W., Reardon, R. C., Evans, M. A., & Domkowski, D. (1989). A differential feature-cost analysis of two computer-assisted career guidance systems (technical report No. 10). Tallahassee, FL: Florida State University, Center for the Study of Technology in Counseling and Career Development.

Sampson, J. P., Jr., & Reardon, R. C. (1990). Evaluating computer-assisted career guidance systems: Synthesis and implications. Journal of Career Development, 17, 143-149.

Sampson, J. P., Jr., & Reardon, R. C. (1991). Current developments in computer-assisted careers guidance in the USA. British Journal of Guidance & Counseling, 19, 113-128.

Sampson, J. P., Jr., & Reardon, R. C. (1993a). General issues bibliography. Tallahassee, FL: Florida State University, Center for the Study of Technology in Counseling and Career Development. (A previous version is available via the ERIC Document Reproduction Service No. ED 363 822)

Sampson, J. P., Jr., & Reardon, R. C. (1993b). Choices bibliography. Tallahassee, FL: Florida State University, Center for the Study of Technology in Counseling and Career Development. (ERIC Document Reproduction Service No. ED 363 819)

Sampson, J. P., Jr., & Reardon, R. C. (1993c). DISCOVER bibliography. Tallahassee, FL: Florida State University, Center for the Study of Technology in Counseling and Career Development. (ERIC Document Reproduction Service No. ED 363 821)

Sampson, J. P., Jr., & Reardon, R. C. (1993d). SIGI PLUS and SIGI bibliography. Tallahassee, FL: Florida State University, Center for the Study of Technology in Counseling and Career Development. (ERIC Document Reproduction Service No. ED 363 823)

Sampson, J. P., Jr., Reardon, R. C., Humphreys, J. K., Peterson, G. W., Evans, M. A., & Domkowski, D. (1989). A differential feature-cost analysis of eight computer-assisted career guidance systems (technical report No. 10) (2nd Ed). Tallahassee, FL: Florida State University, Center for the Study of Technology in Counseling and Career Development.

Sampson, J. P., Jr., Reardon, R. C., Humphreys, J. K., Peterson, G. W., Evans, M. A., & Domkowski, D. (1990). A differential feature-cost analysis of nine computer-assisted career guidance systems (3rd. Ed.). Journal of Career Development, 17, 81-111.

Sampson, J. P., Jr., Reardon, R. C., & Lenz, J. G. (1991). Computer-assisted career guidance systems: Improving the design and use of systems. Journal of Career Development, 17, 185-194.

Sampson, J. P., Jr., Reardon, R. C., Wilde, C. K., Norris, D. S., Peterson, G. W., Strausberger, S. J., Garis, J. W., Lenz, J. G., and Saunders, D. E. (1993). A differential feature-cost analysis of fifteen computer-assisted career guidance systems (technical report No. 10) (4th Ed.). Tallahassee, FL: Florida State University, Center for the Study of Technology in Counseling and Career Development. (ERIC Document Reproduction Service No. ED 363 825)

University of Oregon. (1993). Career Information System [Computer program]. Eugene, OR: National Career Information System.

University of Wisconsin-Madison. (1994). Career Visions [Computer program]. Madison, WI: Center on Education and Work.

**Table 1: Comparison of System Content**

| System Content | CIS | CV | CH | CHCT | CLECT | COIN | DCA | DHS | GIS17 | GIS II | SP | VIS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Introduction** | | | | | | | | | | | | |
| Overview of system content [1] | yes | no | yes | yes | yes | yes | yes | yes | yes [2] | no | yes | yes |
| Explicit recommended pathway for use of the system based on user characteristics [3] | no | no | no | no | no | no | yes | yes | yes [4] | no | yes | no |
| **Assessment** | | | | | | | | | | | | |
| Readiness for career choice | no | no | no | no | no | no | yes | yes | no | no | no | no |
| Clarify life-career roles | no | no | no | no | no | no | yes | no | no | no | no | no |
| Clarify life transitions | no | no | no | no | no | no | yes | no | no | no | no | no |
| Values clarification exercise [5] | no | no | no | no | no | no | yes | yes | no | no | yes | no |
| Capacity to complete paper-and-pencil version of on-line assessment prior to computer use [6] | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | no | yes |
| Standardized tests administered on-line [7] | | | | | | | | | | | | |
| • Career Area Interest Checklist | no | no | yes | yes | no | no | no | no | no | no | no | no |
| • Harrington-O'Shea Career Decision-Making | no | no | no | no | no | no | no | no | yes | yes | no | no |
| • Temperament Survey | no | no | no | no | yes | no | no | no | no | no | no | no |
| • UNIACT Interest Inventory | no | no | no | no | no | no | yes | yes | no | no | no | no |
| Capacity to input scores from paper-and-pencil administration of standardized instruments [8] | | | | | | | | | | | | |
| • ACT Assessment Program (CPP) | no | no | no | no | no | no | yes | yes | no | no | no | yes |
| • ASSET | no | no | no | no | no | no | yes | yes | no | no | no | yes |
| • ASVAB | yes | yes | yes | yes | yes | yes | yes | yes | no | no | no | yes |
| • Career Area Interest Checklist | no | no | yes | yes | no | no | no | no | no | no | no | no |
| • Career Assessment Inventory | yes | yes | no | no | no | no | yes | yes | yes | yes | no | yes |
| • CAPS | no | no | no | no | no | yes | yes | yes | no | no | no | yes |
| • COPS | no | yes | no | no | no | yes | yes | yes | no | no | no | yes |
| • Differential Aptitude Tests | yes | no | no | no | no | no | yes | yes | no | no | no | yes |
| • GATB | yes | yes | yes | yes | yes | yes | no | no | no | no | no | no |
| • Harrington-O'Shea CDM | no | no | no | no | no | no | yes | yes | yes | yes | no | yes |
| • IDEAS | no | yes | no | no | no | no | no | no | no | no | no | no |
| • Kuder GIS | no | no | no | no | no | no | yes | yes | no | no | no | yes |
| • OVIS II/EXPLORE | no | yes | no | no | no | no | yes | yes | no | no | no | yes |

**Table 1: Comparison of System Content**

| System Content | CIS | CV | CH | CHCT | CLECT | COIN | DCA | DHS | GIS17 | GIS II | SP | VIS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| • PLAN | no | no | no | no | no | no | yes | yes | no | no | no | yes |
| • Self-Description Inventory | no | yes | no | no | no | no | no | no | no | no | no | no |
| • Self-Directed Search | yes | yes | no | no | yes | yes | yes | yes | yes | yes | no | yes |
| • Strong Interest Inventory | yes | yes | no | no | yes | no | yes | yes | yes | yes | no | yes |
| • UNIACT Interest Inventory | no | no | no | no | no | no | yes | yes | no | no | no | yes |
| • Vocational Preference Inventory | no | yes | no | no | no | no | no | no | no | no | no | no |
| • Wisconsin Student Assessment | no | yes | no | no | no | no | no | no | no | no | no | no |
| Capacity to deactivate assessment functions as part of the software configuration process | no | no | yes | yes | yes | no | no | no | no | no | yes | no |
| **Identifying Occupational Alternatives** | | | | | | | | | | | | |
| Capacity to select specific variables for identifying occupational alternatives | | | | | | | | | | | | |
| • abilities/skills/activities | yes | yes | yes | yes | no | no | yes | yes | yes | yes | yes | yes |
| • aptitudes | yes | yes | yes | yes | no | no | yes | yes | yes | yes | no | yes |
| • ASVAB occupation composite | yes | no | yes | yes | yes | yes | yes | yes | yes | yes | no | yes |
| • base occupation | no | no | yes | yes | no | no | no | no | yes | yes | no | no |
| • branches of military | no | yes | no | no | no | no | yes | yes | yes | yes | no | yes |
| • COPS/CAPS clusters | no | no | no | no | no | yes | yes | yes | no | no | no | yes |
| • credentials | no | yes | no | no | no | no | no | no | no | no | no | no |
| • education/training | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| • employment outlook | no | yes | yes | yes | no | no | yes | yes | yes [9] | yes [10] | yes | yes |
| • GOE [11] numbers/areas | no | yes | yes | yes | yes | no | no | no | yes | yes | no | no |
| • Holland codes/scores/types | no | yes | yes | yes | yes | yes | yes | yes | yes | yes | no | yes |
| • interests/fields of knowledge | yes | yes | no | no | yes | yes | yes | yes | yes | yes | yes | yes |
| • industry | no | yes | yes | yes | no | yes | no | no | yes | yes | no | no |
| • location (urban/rural) | yes | yes | no | no | no | no | no | no | no | no | no | no |
| • military gender restrictions | no | no | no | no | no | no | no | no | yes | yes | no | no |
| • military work tasks | no | no | no | no | no | no | no | no | no | no | no | no |
| • officer/enlisted status | no | yes | no | no | no | no | yes | yes | yes | yes | no | yes |
| • physical demands/danger (specific) | no | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| • primary physical activities (general) | yes | yes | yes | yes | yes | yes | no | no | no | no | no | no |
| • programs of study/majors | no | yes | yes | yes | no | yes | yes | yes | no | no | yes | yes |
| • salary | yes | yes | yes | yes | no | yes | yes | yes | yes | yes | yes | yes |



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**Table 1: Comparison of System Content**

| System Content | CIS | CV | CH | CHCT | CLECT | COIN | DCA | DHS | GIS17 | GIS II | SP | VIS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| • SOC fields of work | no | yes | yes | yes | no | no | no | no | yes | yes | no | no |
| • temperaments | yes | yes | yes | yes | yes | no | no | no | yes | yes | no | no |
| • values | yes | no | no | no | no | no | yes | yes | yes | yes | yes | no |
| • working conditions/hours/travel | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes [12] | yes |
| Capacity to sort occupational list by various characteristics | no | yes | yes | yes | no | yes | yes | yes | no | no | no | yes |
| Capacity to identify the number of occupations remaining after entering a search variable | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| Capacity to select factors the user wishes to avoid in identifying occupational alternatives | yes | yes | yes | yes | yes | yes | no | no | yes | yes | yes | no |
| Capacity to determine why a particular occupation does not appear on the user's list | yes | no | yes | yes | no | no | yes | yes | yes | yes | yes | yes |
| Capacity to list all rejected occupations | no | yes | yes | yes | no | no | no | no | no | no | no | no |
| Capacity to list occupations just lost in searching | no | yes | yes | yes | no | no | no | no | no | no | no | no |
| Capacity to request a summary of search variables | yes | yes | yes | yes | yes | yes | no | no | no | no | yes | no |
| Capacity to conduct multiple searches in single or multiple files | no | no | no | no | no | no | no | no | yes | yes | no | no |
| Capacity to deactivate one or more search functions as part of the software configuration process | yes | no | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| Crosswalk available from search to occupational information | no | yes | yes | yes | yes | yes | yes | yes | yes | yes | no | yes |
| **Obtaining Occupational Information** | | | | | | | | | | | | |
| Capacity to compare two occupations on one display/printout | no | yes | yes | yes | no | yes | yes | yes | no | no | yes | no |
| Capacity to access occupational titles alphabetically without inputting code numbers | no | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| Crosswalk available directly from the occupational file to other information files | yes | yes | yes [13] | yes | yes | yes | no | no | yes | yes | no | no |
| Capacity to provide a summary of occupational information in addition to detailed categorical information | no | no | yes | yes | yes | yes | yes | yes | yes | yes | no | yes |
| Multiple sources used to develop occupational information | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |

**Table 1: Comparison of System Content**

| System Content | CIS | CV | CH | CHCT | CLECT | COIN | DCA | DHS | GIS17 | GIS II | SP | VIS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cycle for updating of salary & employment outlook data (in months) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| Cycle for updating all other occupational information (in months) | 12 | 36 | 12 | 12 | 12 | 12 | 36 [14] | 36 [15] | 24 | 24 | 12 | 36 [16] |
| Information provided: | | | | | | | | | | | | |
| • categorical information | | | | | | | | | | | | |
| • Chronicle Brief number | no | no | no | no | yes | no | no | no | no | no | no | no |
| • CIP [17] code | no | no | yes | yes | no | no | no | no | no | no | no | no |
| • DOT number/category | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | no | yes |
| • GOE [18] number/category | no | yes | yes | yes | yes | no | yes | yes | yes | yes | no | yes |
| • Holland Code/Type | no | yes | yes | yes | yes | yes | no | no | no | no | no | no |
| • OES [19] number | no | no | yes | yes | no | yes | no | no | yes | yes | no | no |
| • SIC [20] code | no | no | yes | yes | no | yes | no | no | no | no | no | no |
| • SOC number/fields of work | no | yes | yes | yes | yes | yes | yes | yes | no | yes | no | yes |
| • Worker-Trait Group | no | no | yes | yes | no | no | no | no | no | no | no | no |
| • World-of-Work map affiliation | no | no | no | no | no | no | yes | yes | no | no | no | yes |
| • USOE clusters | no | yes | no | no | no | no | no | no | yes | yes | no | no |
| • aptitudes required | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | no | yes |
| • career ladder | no | yes | no | no | no | yes | yes | yes | yes | yes | no | yes |
| • definition/description of occupation | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| • educational requirements | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| • employment outlook | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| • fringe benefits | no | yes | no | no | no | yes | no | no | no | no | no | no |
| • generic skills required in management | no | no | no | no | no | no | no | no | no | no | yes | no |
| • hiring practices | yes | yes | no | no | no | yes | no | no | no | no | no | no |
| • interest fields/likes-dislikes | no | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| • Military Information | | | | | | | | | | | | |
| • alternative job titles | yes | yes | yes [21] | yes | no | yes | yes | yes | yes | yes | no | yes |
| • education/training | yes | yes | yes | yes | no | yes | yes | yes | yes | yes | no | yes |
| • employment and promotions | yes | yes | yes | yes | no | yes | no | no | yes | yes | no | no |
| • general information on size & organization, location, working for the military, economic situation & outlook | yes | yes | no | no | no | yes | no | no | yes | yes | no | no |
| • hiring practices | yes | no | yes | yes | no | no | no | no | yes | yes | no | no |
| • job descriptions | yes | yes | yes | yes | no | yes | yes | yes | yes | yes | no | yes |

**Table 1: Comparison of System Content**

| System Content | CIS | CV | CH | CHCT | CLECT | COIN | DCA | DHS | GIS17 | GIS II | SP | VIS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| • military occupational specialties | yes | yes | yes | yes | no | yes | yes | yes | yes | yes | no | yes |
| • physical demands | yes | no | yes | yes | no | yes | no | no | yes | yes | no | no |
| • pros and cons | no | yes | no | no | no | no | no | no | no | no | no | no |
| • related civilian titles | yes | yes | yes | yes | no | yes | yes | yes | yes | yes | no | yes |
| • related training | yes | no | yes | yes | no | yes | yes | yes | yes | yes | no | yes |
| • service branches | yes | yes | yes | yes | no | yes | yes | yes | yes | yes | no | yes |
| • SOC number | no | no | yes | yes | no | no | no | no | yes | yes | no | no |
| • wages/salary | yes | yes | yes | yes | no | no | no | no | no | no | no | no |
| • where to find more information | no | yes | yes | yes | no | yes | no | no | no | no | no | no |
| • work setting | yes | yes | yes | yes | no | yes | yes | yes | yes | yes | no | yes |
| • Necessary tools & equipment | yes | no | no | no | yes | yes | yes | yes | yes | yes | no | yes |
| • other requirements: experience/licensing/certification | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| • personal qualities/temperaments | yes | no | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| • personal values (e.g., contribution to society,leadership, prestige level,leisure, independence, variety, etc.) | no | no | no | no | yes | no | no | no | no | no | yes | no |
| • physical demands | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | no | yes |
| • pros and cons | no | yes | no | no | yes | no | yes | yes | no | no | yes | yes |
| • promotion/advancement opportunities | no | yes | no | no | no | yes | yes | yes | yes | yes | yes | yes |
| • related information | | | | | | | | | | | | |
| • apprenticeship programs | yes | yes | no | no | yes | yes | yes | yes | no | no | yes | yes |
| • educational programs | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| • military occupations | yes | yes | yes | yes | yes [22] | yes | yes | yes | yes | yes | no | yes |
| • occupations/specialties | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | no | yes |
| • required college courses/programs of study | yes | yes | no | no | yes | yes | yes | yes | yes | yes | yes | yes |
| • salary | | | | | | | | | | | | |
| • average income | no | no | no | no | no | yes | yes | yes | yes | yes | yes | yes |
| • beginning income | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| • range | yes | yes | yes | yes | yes | yes | yes | yes | no | no | yes | yes |
| • top earning possibilities | yes | no | yes | yes | yes | yes | yes | yes | no | no | yes | yes |
| • security | no | no | no | no | no | yes | yes | yes | yes | yes | yes | yes |
| • skills required | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| • suggested high school courses | yes | yes | yes | yes | no | yes [23] | no | no | yes | yes | no | no |
| • training pathways/specific occupational training | no | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |



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| System Content | CIS | CV | CH | CHCT | CLECT | COIN | DCA | DHS | GIS17 | GIS II | SP | VIS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| • typical job titles | yes | yes | no | no | no | yes | no | no | yes | yes | yes | no |
| • where to find more information | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| • work location/where employed | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| • work setting/environment/special conditions | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| • work tasks/activities | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| Capacity to provide state specific information | yes | yes | yes | yes | no | yes | yes | yes | yes | yes | no | yes |
| Number of occupations included | 335 [24] | 761 | 678 | 678 | 700+ | 341 | 497 | 497 | 489 [25] | 489 [25] | 230+ [27] | 497 |
| Instructions for making an occupational visit | yes | no | no | no | no | no | no | no | no | no | no | no |
| Provides general information on: | | | | | | | | | | | | |
| • entrepreneurship quiz | yes | no | no | no | no | no | no | no | no | no | no | no |
| • going into business | yes | no | no | no | no | no | no | no | no | no | no | yes |
| • list of occupations with 5% or more self-employment | yes | no | no | no | no | no | no | no | no | no | no | no |
| • making a business succeed | yes | no | no | no | no | no | no | no | no | no | no | no |
| • options | yes | no | no | no | no | no | no | no | no | no | no | no |
| • rewards and costs | yes | no | no | no | no | no | no | no | no | no | no | no |
| • self-employment characteristics of entrepreneurs | yes | no | no | no | no | no | no | no | no | no | no | no |
| • where to go for assistance | yes | no | no | no | no | no | no | no | no | no | no | no |
| • why businesses fail | yes | no | no | no | no | no | no | no | no | no | no | no |
| **Identifying Educational Alternatives** | | | | | | | | | | | | |
| Capacity to complete | | | | | | | | | | | | |
| • apprenticeship search | yes | no | no | no | no | no | no | no | no | no | no | yes |
| • voc/tech school search | yes [28] | yes | yes [29] | yes | yes | yes [30] | yes | yes | yes [31] | yes [32] | no | yes |
| • two-year college search | yes [33] | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| • four-year college search | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| • graduate & professional school search | yes | no | yes | yes | no | no | yes | yes | yes | yes | yes | no |
| • external degree program search | no | no | no | no | no | no | yes | yes | no | no | no | yes |
| • tech prep program search | no | yes | no | no | no | no | no | no | no | no | yes | yes |
| • financial aid search | yes | no | yes | yes | yes | yes [34] | no | no | yes | yes | no | yes |
| • military training search | no | no | no | no | no | no | yes | yes | yes | yes | no | yes |

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| System Content | CIS | CV | CH | CHCT | CLECT | COIN | DCA | DHS | GIS17 | GIS II | SP | VIS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Capacity to select specific search variables for identifying educational institutions | | | | | | | | | | | | |
| • academic calendar | no | no | yes | yes | no | no | yes | yes | yes | yes | yes [35] | yes |
| • activities/special programs | no | yes | yes | yes | no | no | yes | yes | yes [36] | yes [37] | yes | yes |
| • admissions information | yes | yes | yes | yes | no | yes | yes | yes | yes | yes | yes | yes |
| • admissions selectivity/competitiveness | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| • affiliation/control | no | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| • athletic programs | no | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| • athletic scholarships | no | yes | yes | yes | yes | no | no | no | yes | yes | yes | no |
| • characteristics of students | no | yes | yes | yes | yes | no | yes | yes | yes | yes | yes | yes |
| • community size/type | yes | yes | yes | yes | no | yes | yes | yes | yes | yes | yes | yes |
| • costs/financial aid | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| • day/evening/part-time/full-time programs | no | no | yes | yes | no | no | no | no | yes | yes | yes | no |
| • degrees offered | yes | yes | yes | yes | no | no | yes | yes | yes | yes | yes | yes |
| • enrollment/institution size | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| • geographic location | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| • housing/residence | no | yes | yes | yes | no | yes | yes | yes | yes | yes | yes | yes |
| • programs of study/majors/fields | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| • school regulations | no | yes | no | no | no | no | no | no | no | no | no | no |
| • student performance | no | yes | no | no | no | no | no | no | no | no | no | no |
| Capacity to conduct multiple searches in single or multiple files | no | no | no | no | no | no | no | no | yes | yes | no | no |
| Capacity to evaluate admissions selectivity based on test scores | no | no | yes | yes | no | no | yes | yes | yes | yes | yes [38] | yes |
| Cycle for updating educational information (in months) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 6 | 6 | 12 | 12 |
| Cycle for updating financial aid information (in months) | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| **Obtaining Educational Information** | | | | | | | | | | | | |
| Capacity to access educational institutions alphabetically without inputting code numbers [39] | no | yes | yes | yes | yes | yes | yes | yes | no | no | yes | yes |
| Crosswalk available directly from the educational file to other information files | no | yes | no | no | no | no | no | no | yes | yes | no | no |

**Table 1: Comparison of System Content**

| System Content | CIS | CV | CH | CHCT | CLECT | COIN | DCA | DHS | GIS17 | GIS II | SP | VIS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Capacity to sort institutions/programs of study list by various characteristics | no | yes | no | no | no | yes | yes | yes | no | no | no | yes |
| Information provided (apprenticeship programs) | | | | | | | | | | | | |
| • contact for information | yes | no | no | no | no | yes | no | no | no | no | no | yes |
| • duties | no | no | no | no | no | yes | no | no | no | no | no | yes |
| • general information | yes | no | no | no | no | yes | no | no | no | no | no | yes [40] |
| • number of appointments | no | no | no | no | no | yes | no | no | no | no | no | no |
| • programs/sponsors | yes | no | no | no | no | no | no | no | no | no | no | yes |
| • regional office information | yes | no | no | no | no | yes | no | no | no | no | no | no |
| • related occupations | yes | no | no | no | no | yes | no | no | no | no | no | yes |
| • typical admissions questions | yes | no | no | no | no | no | no | no | no | no | no | yes |
| • work process | yes | no | no | no | no | yes | no | no | no | no | no | yes |
| Information provided (vocational/technical schools) | | | | | | | | | | | | |
| • academic calendar | yes | no | no | no | yes | yes | yes | yes | yes | yes | no | yes |
| • accreditation | yes | no | yes | yes | no | no | no | no | yes | yes | no | no |
| • admissions selectivity | yes | yes [41] | no | no | no | yes | no | no | no | no | no | no |
| • affiliation/control | no | yes | no | no | no | yes | yes | yes | yes | yes | no | yes |
| • alternative credit options | yes | no | no | no | no | yes | no | no | no | no | no | no |
| • application deadline | yes | yes | no | no | no | yes | no | no | yes | yes | no | no |
| • application fee | yes | yes | no | no | yes | yes | no | no | no | no | no | no |
| • athletic programs/sports | yes | yes | no | no | no | yes | no | no | yes | yes | no | no |
| • athletic scholarships | yes | yes | no | no | no | yes | no | no | no | no | no | no |
| • campus activities (non-sports) | yes | yes | no | no | no | yes | no | no | yes | yes | no | no |
| • community size/type | yes | no | no | no | no | yes | no | no | yes | yes | no | no |
| • contact for further information | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | no | yes |
| • costs | yes | yes | no | no | yes | yes | no | no | yes | yes | no | no |
| • degree requirements | yes | yes | no | no | no | no | yes | yes | no | no | no | yes |
| • degrees/certificates offered | yes | yes | no | no | no | no | no | no | yes | yes | no | no |
| • distance to city center | yes | no | no | no | no | no | no | no | no | no | no | no |
| • enrollment | yes | yes | no | no | yes | yes | yes | yes | yes | yes | no | yes |
| • entrance requirements/tests | yes | yes | no | no | yes | yes | no | no | no | no | no | no |
| • faculty characteristics | no | no | no | no | no | no | no | no | yes | yes | no | no |
| • financial aid | yes | yes | no | no | yes | yes | no | no | yes | yes | no | no |
| • foreign study options | yes | no | no | no | no | yes | no | no | no | no | no | no |

**Table 1: Comparison of System Content**

| System Content | CIS | CV | CH | CHCT | CLECT | COIN | DCA | DHS | GIS17 | GIS II | SP | VIS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| • freshman class characteristics | yes | no | no | no | no | yes | no | no | yes | yes | no | no |
| • high school units required | no | yes | yes | yes | no | no | no | no | no | no | no | no |
| • honors courses/program | yes | no | no | no | no | yes | no | no | no | no | no | no |
| • housing/residence | yes | yes | no | no | yes | yes | no | no | yes | yes | no | no |
| • institution/school type | yes | yes | no | no | no | yes | yes | yes | yes | yes | no | yes |
| • military training opportunities | no | yes | no | no | no | yes | no | no | no | no | no | no |
| • part-time degree programs | yes | no | no | no | no | no | no | no | no | no | no | no |
| • programs of study/majors | yes | yes | yes | yes | no | yes | yes | yes | yes | yes | no | yes |
| • special programs/student services | yes | yes | no | no | yes | yes | no | no | yes | yes | no | no |
| • student body characteristics | yes | yes | no | no | yes | yes | yes | yes | yes | yes | no | yes |
| • student regulations | no | yes | no | no | no | no | no | no | no | no | no | no |
| | | | | | | | | | | | | |
| Information provided (2 and 4 year colleges) | | | | | | | | | | | | |
| • academic calendar | yes | no | yes | yes | yes | yes | yes | yes | yes | yes | no | yes |
| • accreditation | yes | no | yes | yes | no | no | yes | yes | yes | yes | no | no |
| • admissions selectivity | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| • affiliation/control | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| • alternative credit options | yes | no | yes | yes | no | yes | yes | yes | yes | yes | yes | no |
| • application deadline | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| • application fee | yes | yes | yes | yes | yes | yes | no | no | no | no | no | no |
| • athletic programs/sports | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| • athletic scholarships | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | no | yes |
| • campus activities (non-sports) | yes | no | yes | yes | no | yes | yes | yes | yes | yes | yes | yes |
| • community size/type | yes | no | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| • contact for further information | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | no | yes |
| • costs | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| • degree requirements | yes | no | no | no | no | no | no | no | no | no | no | no |
| • degrees/certificates offered | yes | yes | yes | yes | yes | no | yes | yes | yes | yes | no | yes |
| • distance to city center | no | no | no | no | no | no | no | no | no | no | no | no |
| • employment follow-up data by major | no | no | no | no | no | no | no | no | yes | yes | no | no |
| • enrollment | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| • entrance requirements/tests | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| • faculty characteristics | no | no | no | no | no | no | no | no | yes | yes | no | no |
| • financial aid | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| • foreign study options | yes | no | yes | yes | no | yes | yes | yes | yes | yes | yes | yes |

**Table 1: Comparison of System Content**

| System Content | CIS | CV | CH | CHCT | CLECT | COIN | DCA | DHS | GIS17 | GIS II | SP | VIS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| • freshman class characteristics | yes | no | yes | yes | no | yes | yes | yes | yes | yes | yes | yes |
| • high school credits/units required | no | yes | yes | yes | yes | no | yes | yes | no | no | no | yes |
| • honors courses/program | yes | no | yes | yes | no | yes | yes | yes | yes | yes | yes | yes |
| • housing/residence | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| • institution/school type | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | no | yes |
| • military training opportunities | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| • part-time degree programs | yes | no | no | no | no | yes | no | no | yes | yes | no | no |
| • programs of study/majors | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| • special programs/student services | yes | yes | yes | yes | no | yes | yes | yes | yes [42] | yes | yes | yes |
| • student body characteristics | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| • student regulations | no | yes | no | no | yes | no | no | no | no | no | no | no |
| | | | | | | | | | | | | |
| Information provided (graduate schools): | | | | | | | | | | | | |
| • academic calendar | yes | no | no | no | no | no | yes | yes | yes | yes | yes [43] | no |
| • accreditation | yes | no | yes | yes | no | no | no | no | yes | yes | yes | no |
| • admissions selectivity | yes | no | no | no | no | no | no | no | yes | yes | no | no |
| • affiliation/control | yes | no | yes | yes | no | no | yes | yes | yes | yes | yes | no |
| • alternative credit options | yes | no | no | no | no | no | yes | yes | yes | yes | no | no |
| • application deadline | yes | no | yes | yes | no | no | no | no | yes | yes | yes | no |
| • application fee | yes | no | no | no | no | no | no | no | no | no | yes | no |
| • athletic programs/sports | yes | no | no | no | no | no | no | no | yes | yes | no | no |
| • athletic scholarships | yes | no | no | no | no | no | no | no | yes | yes | no | no |
| • campus activities (non-sports) | yes | no | no | no | no | no | no | no | yes | yes | no | no |
| • community size/type | yes | no | yes | yes | no | no | yes | yes | yes | yes | yes | no |
| • contact for further information | yes | no | yes | yes | no | no | yes | yes | yes | yes | yes | no |
| • costs | yes | no | yes | yes | no | no | yes | yes | yes | yes | yes | no |
| • degree requirements | yes | no | no | no | no | no | yes | yes | no | no | yes | no |
| • degrees offered | yes | no | yes | yes | no | no | yes | yes | yes | yes | yes | no |
| • distance to city center | no | no | no | no | no | no | no | no | no | no | no | no |
| • enrollment | yes | no | no | no | no | no | yes | yes | yes | yes | yes | no |
| • entrance requirements/tests | yes | no | yes | yes | no | no | yes | yes | yes | yes | no | no |
| • faculty characteristics | no | no | yes | yes | no | no | no | no | yes | yes | yes | no |
| • financial aid | yes | no | yes | yes | no | no | yes | yes | yes | yes | yes | no |
| • foreign study options | yes | no | no | no | no | no | no | no | yes | yes | no | no |
| • housing/residence | yes | no | yes | yes | no | no | yes | yes | yes | yes | yes | no |

**Table 1: Comparison of System Content**

| System Content | CIS | CV | CH | CHCT | CLECT | COIN | DCA | DHS | GIS17 | GIS II | SP | VIS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| • institution/school type | yes | no | yes | yes | no | no | yes | yes | yes | yes | yes | no |
| • job placement statistics | no | no | no | no | no | no | yes | yes | yes | yes | no | no |
| • military training opportunities | yes | no | no | no | no | no | no | no | yes | yes | no | no |
| • part-time degree programs | no | no | no | no | no | no | no | no | yes | yes | yes | no |
| • programs of study/majors | yes | no | yes | yes | no | no | yes | yes | yes | yes | yes | no |
| • special programs/student services | yes | no | yes | yes | no | no | yes | yes | yes | yes | yes | no |
| • starting salary of graduates | no | no | no | no | no | no | no | no | yes | yes | no | no |
| • student body characteristics | yes | no | no | no | no | no | yes | yes | yes | yes | yes | no |
| | | | | | | | | | | | | |
| Information provided (external degree programs): | | | | | | | | | | | | |
| • accreditation | no | no | no | no | no | no | yes | yes | no | no | no | yes |
| • alternative credit options | no | no | no | no | no | no | yes | yes | no | no | no | yes |
| • contact for further information | no | no | no | no | no | no | yes | yes | no | no | no | yes |
| • costs | no | no | no | no | no | no | yes | yes | no | no | no | yes |
| • degrees/certificates offered | no | no | no | no | no | no | yes | yes | no | no | no | yes |
| • enrollment | no | no | no | no | no | no | yes | yes | no | no | no | yes |
| • entrance requirements/tests | no | no | no | no | no | no | yes | yes | no | no | no | yes |
| • programs of study/majors | no | no | no | no | no | no | yes | yes | no | no | no | yes |
| • special programs/student services | no | no | no | no | no | no | yes | yes | no | no | no | yes |
| | | | | | | | | | | | | |
| Application/financial aid request letter generator | no | no | yes | yes | yes | yes | no | no | no | no | no | no |
| Assessment of financial aid need [44] | no | no | no | no | no | no | yes | yes | no | no | no | no |
| General information provided on financial aid | | | | | | | | | | | | |
| • application materials | yes | no | yes | yes | no | yes [45] | no | no | no | no | no | no |
| • books about financial aid | yes | no | no | no | no | yes | no | no | no | no | no | no |
| • glossary of financial aid terms | yes | no | no | no | yes | yes | no | no | no | no | no | no |
| • sources of financial aid | | | | | | | | | | | | |
| • aid for military personnel/dependents | yes | no | yes | yes | yes | yes | yes | yes | yes | yes | no | yes |
| • grants | yes | no | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| • loans | yes | no | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| • private & special programs | yes | no | yes | yes | yes | yes | yes | yes | yes | yes | no | yes |
| • work programs | yes | no | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| • steps for getting financial aid | yes | no | yes | yes | yes | yes | no | no | no | no | no | no |

**Table 1: Comparison of System Content**

| System Content | CIS | CV | CH | CHCT | CLECT | COIN | DCA | DHS | GIS17 | GIS II | SP | VIS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Capacity to plan a high school curriculum on the basis of educational & career goals | yes [46] | no | yes | yes | no | no | no | no | no | no | no | no |
| Capacity to compare 2 or more schools on one screen | yes | yes | no | no | no | yes | no | no | no | no | no | no |
| Overview of nontraditional approaches to education | no | no | no | no | no | no | yes | yes | no | no | yes | yes |
| General descriptions of programs of study | yes | yes | no | no | yes | yes | yes | yes | yes | yes | yes | yes |
| Typical generic curriculum (listing of courses) | no | no | yes [47] | yes | no | yes | no | no | no | no | yes | no |
| Description of work tasks to encourage learning by doing | no | no | no | no | no | no | no | no | no | no | yes | no |
| User estimation of chances of successfully completing a preparation program | no | no | no | no | no | no | no | no | no | no | yes | no |
| Development of an educational action plan | no | no | no | no | no | no | yes | yes | no | no | yes | no |
| Number of specific educational & training institutions described | 3600 [48] | 1541 | 5716 | 5716 | 7500+ | 3200+ | 6750 | 6750 | 14657 | 14657 | 800+ [49] | 5191 |
| Number of specific financial aid programs/sources described [50] | 1000 [51] | 520 | 1506 | 1506 | 1370+ | 14K [52] | 24 | 24 | 700+ [53] | 700+ | 7 | 49 |
| **Coping With Adult Transitions** | | | | | | | | | | | | |
| Understanding adult transitions | no | no | no | no | no | no | yes | no | no | no | no | no |
| Understanding life-career roles | no | no | no | no | no | no | yes | no | no | no | no | no |
| General information on | | | | | | | | | | | | |
| • calculating preparation costs | no | no | no | no | no | no | no | no | no | no | yes | no |
| • care for adults | no | no | no | no | no | no | no | no | no | no | yes | no |
| • child care | no | no | no | no | no | no | no | no | no | no | yes | no |
| • credit for military training | no | no | no | no | no | no | yes | yes | no | no | yes | yes |
| • credit for prior learning | no | no | no | no | no | no | yes | yes | no | no | yes | yes |
| • credit via examination | no | no | no | no | no | no | yes | yes | no | no | yes | yes |
| • internship/co-op placement | no | no | no | no | no | no | no | no | no | no | yes | no |
| • financial aid | yes | no | no | no | no | yes | yes | yes | no | no | yes | yes |
| • finding accredited home-study courses | no | no | no | no | no | no | yes | yes | no | no | yes | no |
| • time management | no | no | no | no | no | no | no | no | no | no | yes | no |
| Capacity to analyze work history by DOT number in terms of [54] | | | | | | | | | | | | |
| • aptitudes | no | no | no | yes | no | no | no | no | no | no | no | no |

**Table 1: Comparison of System Content**

| System Content | CIS | CV | CH | CHCT | CLECT | COIN | DCA | DHS | GIS17 | GIS II | SP | VIS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| • crosswalks (CIP,DOT,GOE,OES,SIC) | yes | no | no | yes | no | no | no | no | no | no | no | no |
| • earnings | no | no | no | yes | no | no | no | no | no | no | no | no |
| • educational level | no | no | no | yes | no | no | no | no | no | no | no | no |
| • employment outlook | no | no | no | yes | no | no | no | no | no | no | no | no |
| • Holland types | no | no | no | yes | no | no | no | no | no | no | no | no |
| • hours and travel | no | no | no | yes | no | no | no | no | no | no | no | no |
| • interests | no | no | no | yes | no | no | no | no | no | no | no | no |
| • physical demands | no | no | no | yes | no | no | no | no | no | no | no | no |
| • primary physical activity | no | no | no | yes | no | no | no | no | no | no | no | no |
| • SOC fields of work | no | no | no | yes | no | no | no | no | no | no | no | no |
| • temperaments | no | no | no | yes | no | no | no | no | no | no | no | no |
| • worksite/environment | no | no | no | yes | no | no | no | no | no | no | no | no |
| Capacity for a counselor to input specific comments into a user's printout | no | no | yes | yes | no | no | no | no | no | no | no | no |
| **Decision Making** | | | | | | | | | | | | |
| On-line description of a career decision-making model | no | no | no | no | no | no | yes | yes | no | no | yes | no |
| Integration of summary data from all other system modules into the decision-making module | no | no | no | no | no | no | no | no | no | no | yes | no |
| Integration of 3 occupational alternatives into a decision-making matrix that balances potential rewards & chances of successfully completing preparation requirements, for the purpose of identifying a tentative choice | no | no | no | no | no | no | no | no | no | no | yes | no |
| Feedback to the user regarding the characteristics of her or his tentative choice based on a decision-making matrix | no | no | no | no | no | no | no | no | no | no | yes | no |
| **Employment Planning** | | | | | | | | | | | | |
| General information on: | | | | | | | | | | | | |
| • books to help in the job search | yes | no | no | no | no | no | no | no | no | no | no | no |
| • building a network of contacts | yes | no | no | no | no | no | yes | yes | no | no | yes | yes |



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**Table 1: Comparison of System Content**

| System Content | CIS | CV | CH | CHCT | CLECT | COIN | DCA | DHS | GIS17 | GIS II | SP | VIS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| • demonstrating job skills or job search skills | no | no | no | no | no | no | yes | yes | no | no | yes | yes |
| • employee benefits | yes | no | no | no | no | no | no | no | no | no | no | no |
| • employer expectations | yes | no | no | no | no | no | no | no | no | no | no | no |
| • employment advertisements | no | no | no | no | no | no | yes | yes | no | no | no | yes |
| • employment laws & regulations | yes | no | no | no | no | no | no | no | no | no | no | no |
| • entrepreneurship/start your own business | yes | no | no | no | no | no | yes | yes | no | no | no | yes |
| • how to research firms & jobs | yes | no | no | no | no | no | no | no | no | no | no | no |
| • job applications | yes | no | no | no | no | no | yes | yes | no | no | no | yes |
| • job interviewing | yes | no | no | no | no | no | yes | yes | no | no | no | yes |
| • letter writing | yes | no | no | no | no | no | yes | yes | no | no | no | yes |
| • placement agencies | no | no | no | no | no | no | yes | yes | no | no | no | yes |
| • planning/implementing a job search | yes | no | no | no | no | no | yes | yes | no | no | no | yes |
| • resume writing | yes | no | no | no | no | no | yes | yes | no | no | yes | yes |
| • support services for job seekers | yes | no | no | no | no | no | no | no | no | no | no | no |
| • use of Myers-Briggs Type Indicator for employment planning | no | no | no | no | no | no | yes | yes | no | no | no | no |
| • work-related family issues | yes | no | no | no | no | no | no | no | no | no | no | no |
| Cover letter practice exercise | no | no | no | no | no | no | yes | yes | no | no | no | yes |
| Identifying options for developing new skills | no | no | no | no | no | no | no | no | no | no | yes | no |
| Identifying next steps in achieving career goals | no | no | no | no | no | no | no | no | no | no | yes | no |
| Overview of how to prepare & skills required for specific occupations | no | no | no | no | no | no | yes | yes | no | no | yes | yes |
| Writing a resume draft | no | no | no | no | no | no | yes | yes | no | no | no | yes |
| **User Exit** | | | | | | | | | | | | |
| Report/review of all system modules | | | | | | | | | | | | |
| • current session | no | no | yes [55] | yes | no | no | yes | yes | no | no | yes | no |
| • sessions completed to date | no | no | yes | yes | no | no | yes | yes | no | no | yes | no |
| Identifying occupations to be maintained in the user | no | no | yes | yes | yes | no | yes | yes | no | no | no | no |
| Completing a brief on-line anonymous evaluation questionnaire (optional) | no | no | no | no | no | no | yes | yes | no | no | yes | yes |

**Table 1: Comparison of System Content**

| System Content | CIS | CV | CH | CHCT | CLECT | COIN | DCA | DHS | GIS17 | GIS II | SP | VIS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Local Data Option** | | | | | | | | | | | | |
| Capacity to integrate local data into the system | yes | no | yes | yes | no | yes | yes | yes | yes | yes | yes | yes |
| Capacity to customize introductory display following sign-on | yes | no | yes | yes | no | yes | yes | yes | yes | no | no | no |
| Capacity to customize exit display | yes | no | yes | yes | no | no | yes | yes | no | no | yes | no |

**Table 1: Comparison of System Content**

**Note:** (1) Some CACG system content features are easy to identify, while other system content features are embedded within other features and are more difficult to locate. Software developers can provide information about locating specific system content features that are not readily apparent.

CACG abbreviations include:
CIS = Career Information System (University of Oregon, 1993) Operating in 13 states & 1 city with localized information. Specific information included may vary from state to state; CH = Choices (Careerware-ISM Systems Corporation, 1993); CHCT = Choices CT[for Adults in Career Transitions (Careerware-ISM System Corporation, 1993)]; CLECT= MODULAR CLECT (Chronicle Guidance Publications, 1993); COIN = COIN (COIN Educational Products, 1993); CV = Career Visions (University of Wisconsin-Madison, 1994); DCA = DISCOVER for Colleges and Adults, (American College Testing Program, 1993). A very similar version, DISCOVER for Colleges and Adults (Special Version), is also available. Differences between these versions include lower reading level, reduced number of user characteristic categories required for "guidance approach" sign-on, localization options for sign-on process, and elimination of counselor reports that require personal data; DHS = DISCOVER for High Schools (American College Testing Program, 1993); GIS 17 = Guidance Information System Version 17 (Riverside Publishing Company, 1993); GIS II = Guidance Information System II (Riverside Publishing Company, 1993); SP = SIGI PLUS (Educational Testing Service, 1993); and VIS = VISIONS PLUS (American College Testing Program, 1993).

**Note:** (2) Only available within the tutorial.

**Note:** (3) With DISCOVER for Colleges and Adults and DISCOVER for High Schools, recommended pathway is optional with module one.

**Note:** (4) For "Direct" and "Search" only.

**Note:** (5) Simulation-based.

**Note:** (6) Potentially reduces the amount of time the user spends at the computer.

**Note:** (7) The user may complete a computer-administered version of a standardized paper-and-pencil instrument.

**Note:** (8) The user may complete a paper-and-pencil administration of a standardized instrument prior to computer use.

**Note:** (9) Capacity to search on 6 employment outlook characteristics for each of the 50 states.

**Note:** (10) Capacity to search on 6 employment outlook characteristics for each of the 50 states.

**Note:** (11) GOE = Guide to Occupational Exploration.

**Note:** (12) Also provides search by tech prep cluster.

**Note:** (13) Crosswalk available between subfiles but not between occupational and educational files.

***Table 1: Comparison of System Content***

**Note**: (14) One-third of all occupations are updated each year.

**Note**: (15) One-third of all occupations are updated each year.

**Note**: (16) One-third of all occupations are updated each year.

**Note**: (17) CIP = Classification of Instructional Programs.

**Note**: (18) GOE = Guide for Occupational Exploration.

**Note**: (19) OES = Occupational Employment Statistics.

**Note**: (20) SIC = Standard Industrial Classification.

**Note**: (21) Military information available only for those occupations identified as military occupations.

**Note**: (22) With the input of ASVAB scores, a military career page number is also supplied.

**Note**: (23) High school subjects can be related to occupations.

**Note**: (24) Base number - the total number of occupations will vary depending on the particular state.

**Note**: (25) 1000+ specialized DOT occupational descriptions.

**Note**: (26) 1000+ specialized DOT occupational descriptions.

**Note**: (27) Also includes more than 550 job titles and alternatives.

**Note**: (28) Generally includes in-state schools only.

**Note**: (29) For Choices and Choices CT, public and private school search distinctions are possible for all institution types.

**Note**: (30) Separate school search information available depending on major.

**Note**: (31) For each of the 50 states.

**Note**: (32) For each of the 50 states.

**Table 1: Comparison of System Content**

**Note:** (33) Generally includes in-state schools only.

**Note:** (34) Available with the optional CASHE system.

**Note:** (35) Indicates feature available on College Explorer and/or Graduate School Selector.

**Note:** (36) Includes special program search for students with varying disabilities.

**Note:** (37) Includes special program search for students with varying disabilities.

**Note:** (38) College Explorer only.

**Note:** (39) The validity of educational and financial aid information is dependent upon institutional self-report. Therefore, accuracy and currency of the information varies among institutions and systems.

**Note:** (40) Information provided is for Maryland schools only.

**Note:** (41) Upper Midwest region data only.

**Note:** (42) For GIS17 and GIS II, includes special program search for students with varying disabilities.

**Note:** (43) Optional Graduate school selector only.

**Note:** (44) For DCA and DHS, completion of forms prior to computer use is required.

**Note:** (45) Financial aid information is optional with the CASHE system.

**Note:** (46) Optional High School Planner for states to purchase, requires local data entry.

**Note:** (47) For Choices and Choices CT, it is a generic high school curriculum, not college.

**Note:** (48) Includes 2 and 4 year information. Additional information provided by state computer-based CIDS.

**Note:** (49) College Explorer and Graduate School Selector.

**Note:** (50) Developers define financial aid information in a variety of ways, resulting in considerable variability in the number of financial aid sources reported.

**Table 1: Comparison of System Content**

**Note**: (51) Additional information provided by state computer-based CIDS.

**Note**: (52) 14000+ with optional financial aid files.

**Note**: (53) Additional financial aid information is available from GIS at an extra cost.

**Note**: (54) Data used as input for occupational exploration.

**Note**: (55) The printed summary is optional.

**Table 2: Comparison of User Friendly Features**

| User Friendly Features | CIS | CV | CH | CHCT | CLECT | COIN | DCA | DHS | GIS17 | GISII | SP | VIS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Full spectrum color scheme video displays [1] | yes [2] | yes | yes [3] | yes [4] | no | yes | yes | yes | no | yes | yes | no |
| Analogous color scheme video displays | no | no | yes | yes | no | yes | yes | yes | no | no | no | yes |
| System content color-coded [5] | no | no | no | no | no | yes | no | no | no | no | yes | no |
| Multi-colored graphic-enhanced screen displays | | | | | | | | | | | | |
| • entry screen graphics | no | yes | yes | yes | yes | yes | yes | yes | no | yes | yes | yes |
| • main program | no | yes | yes | yes | no | yes | yes | yes | no | yes | yes | yes |
| • menus/program manager | no | yes | yes | yes | no | yes | yes | yes | no | yes | yes | yes |
| Upper/lower case characters | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| Operates in a windows-like environment | no | yes | no | no | no | no | no | no | no | yes [6] | no | no |
| Special purpose function/alt keys/buttons | | | | | | | | | | | | |
| • back-up function | yes | yes | Esc [7] | Esc | yes | yes | yes | yes | yes | yes | yes | yes |
| • locate position in the system | no | no | no | no | no | no | yes | yes | yes | yes | no | yes |
| • previous item back-up (on-line assessment instruments only) | yes | no | no | no | yes | no | yes | yes | yes | yes | no | yes |
| • print screen | yes | yes | yes | yes | yes | yes | yes | yes | yes | no | yes | yes |
| • quick exit | no | yes | Esc | Esc | no | yes | yes | yes | yes | yes | yes | yes |
| • repeat instructions/help | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| Orientation to function keys/buttons | no | no | yes | yes | no | no | yes | yes | no | no | yes | yes |
| Menu driven screen sequencing | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| Screen indicates system location | no | yes | yes | yes | no | yes | no | no | yes | yes | no | no |
| Main menu/module menu indicates completed components | no | yes | no | no | no | no | yes | yes | no | no | no | no |
| Preliminary operating instructions | yes | no | yes | yes | yes | no | yes | yes | yes | yes [8] | yes | yes |
| Explicit recommended pathway for use of system based on user characteristics | no | no | no | no | no | no | yes | yes | no | no | yes | no |
| Staff quick access to system content | no | no | yes | yes | no | no | yes | yes | no | no | yes | yes |
| Introductory instructions omitted for experienced users | no | no | yes | yes | no | no | yes | yes | yes | yes | yes | no |
| Purpose of each component/module explained | no | yes | yes | yes | yes | no | yes | yes | yes | yes | yes | no |
| Name added to printouts | yes | yes | yes | yes | yes | yes | no | no | yes | yes [9] | yes | yes |
| Date added to printouts | no | no | yes | yes | no | yes | no | no | yes | yes | yes | yes |

**Table 2: Comparison of User Friendly Features**

| User Friendly Features | CIS | CV | CH | CHCT | CLECT | COIN | DCA | DHS | GIS17 | GISII | SP | VIS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Availability of optional detailed information (layering, e.g., expanded definitions of terms) | no | yes | no | no | no | yes | no | no | yes | yes | yes | no |
| Summary screen display/printout | | | | | | | | | | | | |
| • for each component/module | yes [10] | no | yes | yes | yes | no | yes | yes | yes [11] | yes [12] | yes | no |
| • for each completed session or to date | no | no | yes | yes | no | no | yes | yes | no | no | yes | no |
| User memory record (system capability to store user data between sessions) | no | yes | yes | yes | yes | no | yes | yes | no | no | yes | no |
| User data maintenance capabilities | | | | | | | | | | | | |
| • user data delete option | no | no | yes | yes | yes | no | yes | yes | no | no | yes | no |
| • password protection for user data [13] | no | yes | yes | yes | yes | no | yes | yes | no | no | yes | no |
| Data collection for accountability & research | | | | | | | | | | | | |
| • data on system use | | | | | | | | | | | | |
| • aggregate | yes | no | yes | yes | yes | no | yes | yes | yes | yes | yes | yes |
| • individual | no | no | no | no | yes | no | yes | yes | no | no | no | no |
| • demographic data | | | | | | | | | | | | |
| • aggregate | no | no | no | no | no | no | yes | yes | no | no | yes | yes |
| • individual | no | no | no | no | yes | no | yes | yes | no | no | no | no |
| • user satisfaction data | no | no | no | no | no | no | yes | yes | no | no | yes | yes |
| Integration of user data from one component/module into another component/module | no | yes | yes | yes | no | yes | yes | yes | no | no | yes | no |
| Mainframe version available | yes | no | no | no | no | yes | no | no | yes | no | no | no |
| Macintosh version available | no | yes | yes | yes | no | yes | no | no | no | yes | no | no |
| Apple II version available | no | no | no | no | no | no | no | no | yes | no | no | no |
| CD-ROM version available | no | yes | no | no | no | yes | no | no | no | no | no | no |

## Table 2: Comparison of User Friendly Features

**Note:** (1) Assumes United States software versions on IBM compatible microcomputers unless otherwise noted. Response time after data input varies among computers depending on type of processor, clock speed, memory available, hard disk access speed, and local area network capabilities. Video display (monitor) screen resolution (sharpness) varies with different monitors and interfaces, with Super VGA, VGA, and EGA formats providing better resolution that CGA formats.

**Note:** (2) Limited to a blue background for all displays and green headings for selected displays.

**Note:** (3) For Choices and Choices CT, only the Career Area Interest Checklist is a full spectrum color scheme video display.

**Note:** (4) Transferable Skills module only.

**Note:** (5) Color coding of instruction/error messages and display backgrounds to match system content.

**Note:** (6) Mouse driven or keyboard driven input.

**Note:** (7) Esc = Escape (Esc) key provides this function.

**Note:** (8) Optional.

**Note:** (9) Also automatically prints organizational addresses when requested.

**Note:** (10) Summary provided only following completion of Quest, School Sort, and Assessment Link.

**Note:** (11) Summary provided only following completion of Harrington-O'Shea CDM.

**Note:** (12) Summary provided only following completion of Harrington-O'Shea CDM.

**Note:** (13) Uses private number or social security number in place of password (CLECT, DISCOVER for Colleges and Adults, DISCOVER for High Schools, and SIGI PLUS).

**Table 3: Comparison of Support Materials and Services Available from Developers**

| Support Materials & Services | CIS | CV | CH | CHCT | CLECT | COIN | DCA | DHS | GIS 17 | GIS II | SP | VIS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Support Materials for Users** | | | | | | | | | | | | |
| Nonconsumable materials | | | | | | | | | | | | |
| • user guide/handbook | no | yes | yes | yes | yes | no | yes | yes | yes | yes | yes | yes |
| • lists of occupations [1] | | | | | | | | | | | | |
| • alphabetical | yes | yes | yes | yes | no | yes | yes | yes | yes | yes | yes | yes |
| • apprenticed occupations | no | yes | no | no | no | no | no | no | no | no | no | no |
| • career fields/occupational groups | yes | no | no | no | no | yes | yes | yes | no | no | no | no |
| • DOT numbers | no | no | no | no | no | no | no | no | yes | yes | no | no |
| • high tech occupations | no | no | no | no | no | no | no | no | no | no | no | yes |
| • military titles | yes | yes | yes | yes | no | no | yes | yes | yes | yes | no | yes |
| • SOC - fields of work | no | yes | yes | yes | no | no | no | no | no | no | no | no |
| • USOE clusters | no | no | no | no | no | no | no | no | yes | yes | no | no |
| • worker-trait groups (GOE) | no | no | yes | yes | no | no | no | no | no | no | no | no |
| • lists of institutions | | | | | | | | | | | | |
| • combined list of all levels | yes | yes | yes | yes | no | yes | no | no | no | no | no | no |
| • combined list by region/state | yes | yes | yes | yes | no | no | no | no | no | no | no | no |
| • vocational/technical schools | yes | yes | no | no | no | no | yes | yes | yes | yes | no | yes |
| • two-year colleges | yes | yes | no | no | no | no | yes | yes | yes | yes | no | yes |
| • four-year colleges | yes | yes | no | no | no | no | yes | yes | yes | yes | no | yes |
| • graduate schools | yes | no | no | no | no | no | yes | yes | yes | yes | no | no |
| • external degree schools | no | no | no | no | no | no | yes | yes | no | no | no | yes |
| • lists of programs | | | | | | | | | | | | |
| • apprenticeship programs | no | yes | no | no | no | no | no | no | no | no | no | yes |
| • CIP code | no | yes | no | no | no | no | no | no | no | no | no | no |
| • combined list of all levels | yes | yes | yes | yes | no | no | no | no | no | no | yes | no |
| • external degree programs | no | no | no | no | no | no | no | no | no | no | no | yes |
| • military programs | no | no | yes | yes | no | no | yes | yes | no | no | no | yes |
| • vocational/technical programs | no | yes | no | no | yes | no | yes | yes | yes | yes | no | yes |
| • list of financial aid sources | yes | no | no | no | yes | no | yes | yes | yes | yes | no | yes |
| • working for yourself | yes | no | no | no | no | no | no | no | no | no | no | no |
| • poster - quick reference for system operation | yes | no | no | no | no | yes | yes | yes | yes | yes | no | no |
| • poster - World-of-Work map | no | no | no | no | no | no | yes | yes | no | no | no | yes |

**Table 3: Comparison of Support Materials and Services Available from Developers**

| Support Materials & Services | CIS | CV | CH | CHCT | CLECT | COIN | DCA | DHS | GIS 17 | GIS II | SP | VIS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| • poster - life-career rainbow | no | no | no | no | no | no | yes | no | no | no | no | no |
| • quick reference card for system operation | no | no | no | no | no | no | no | no | yes | yes | no | no |
| • quick reference card for function keys | no | no | yes | yes | no | no | yes | yes | no | no | yes | yes |
| Consumable materials | | | | | | | | | | | | |
| • user guide/handbook | yes | no | yes | yes | no | no | yes | yes | no | no | yes | yes |
| • Harrington-O'Shea CDM interpretive folder | no | no | no | no | no | no | no | no | yes | yes | no | no |
| • printout checklist | no | no | no | no | no | no | no | no | no | no | yes | no |
| • post-system use guide | no | no | no | no | no | no | no | no | no | no | yes | no |
| • temperament survey | no | no | no | no | yes | no | no | no | no | no | no | no |
| • workbook | no | no | yes | yes | no | no | yes | yes | no | no | yes [2] | yes |
| **Support Materials for Institutions** | | | | | | | | | | | | |
| Bibliography | | | | | | | | | | | | |
| Supplemental information resources | yes | no | yes | yes | no | no | yes | yes | no | no | yes | yes |
| System design/use references | yes | no | yes | yes | no | no | yes | yes | no | no | yes | yes |
| Manual | | | | | | | | | | | | |
| Publication date [3] | 1992 | 1994 | 1993 | 1993 | 1993 | 1993 | 1993 | 1993 | 1993 | 1993 | 1993 | 1993 |
| Professional/paraprofessional | | | | | | | | | | | | |
| • administrative/research reports | no | no | yes | yes | yes | no | yes | yes | no | no | yes | yes |
| • case study examples | no | no | yes | yes | no | no | no | no | no | no | yes | no |
| • overhead transparency/handout masters for training | yes | no | yes | yes | no | no | no | no | no | no | no | no |
| • counseling process | yes | no | yes | yes | no | no | yes | yes | no | no | yes | yes |
| • crosswalk documents/tables | yes | yes | yes | yes | no | no | no | no | no | no | no | no |
| • database/development procedures | | | | | | | | | | | | |
| • educational information sources | yes | no | yes | yes | no | no | yes | yes | yes | yes | yes | yes |
| • financial aid sources | yes | no | no | no | no | no | yes | yes | yes | yes | no | yes |
| • occupational information sources | yes | no | yes | yes | no | no | yes | yes | yes | yes | yes | yes |
| • important phone numbers | yes | no | yes | yes | yes | yes | yes | yes | no | no | yes | yes |

**Table 3: Comparison of Support Materials and Services Available from Developers**

| Support Materials & Services | CIS | CV | CH | CHCT | CLECT | COIN | DCA | DHS | GIS 17 | GIS II | SP | VIS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| • instructions for use with special populations | yes | no | yes | yes | no | no | no | no | no | no | no | no |
| • license agreement | no | no | no | no | yes | no | yes | yes | no | no | no | yes |
| • recommendations for integrating the software into service delivery | | | | | | | | | | | | |
| • counselor attitudes | yes | no | yes | yes | no | no | yes | yes | no | no | yes | no |
| • pre-system use client preparation | yes | no | yes | yes | yes | no | yes | yes | no | no | yes | no |
| • post-system use intervention | no | no | yes | yes | no | no | no | no | no | no | yes | no |
| • materials for curriculum integration | yes | no | yes | yes | no | no | yes | yes | yes | yes | no | no |
| • sample activities | yes | no | yes | yes | no | no | yes | yes | no | no | no | yes |
| • sample service delivery forms | yes | no | yes | yes | no | no | yes | yes | no | no | yes | yes |
| • standards for system use | yes | no | yes | yes | yes | no | yes | yes | no | no | no | no |
| • statement of system relationship to NOICC standards | no | no | yes | yes | yes | no | no | no | no | no | no | no |
| • system design process | yes | no | yes | yes | yes | no | no | no | no | no | yes | no |
| • system overview | | | | | | | | | | | | |
| • component/module overview | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| • overview of pathways/routes | yes | yes | yes | yes | yes | yes | yes | yes | no | no | yes | yes |
| • system/feature updates | no | no | yes | yes | no | yes | yes | yes | no | no | yes | yes |
| • theoretical basis for system design/use | no | no | yes | yes | yes | no | yes | yes | no | no | yes | yes |
| • training by component/module | yes | no | yes | yes | yes | no | yes | yes | no | no | yes | no |
| • use of system-related assessment inventories | yes | no | yes | yes | yes | no | yes | yes | no | no | yes | no |
| • user characteristics for counselor awareness | yes | no | yes | yes | no | no | no | no | no | no | yes | no |
| • user needs and system use options | yes | yes | yes | yes | no | no | yes | yes | no | no | yes | yes |
| • using printouts in counseling | yes | no | yes | yes | no | no | no | no | no | no | yes | no |
| | | | | | | | | | | | | |
| Site administrator | | | | | | | | | | | | |
| • choosing the best location | yes | no | yes | yes | no | no | yes | yes | no | no | no | yes |
| • scheduling | no | no | yes | yes | no | no | no | no | no | no | no | no |
| • selecting/training direct service providers | yes | no | yes | yes | no | no | no | no | no | no | no | no |

**Table 3: Comparison of Support Materials and Services Available from Developers**

| Support Materials & Services | CIS | CV | CH | CHCT | CLECT | COIN | DCA | DHS | GIS 17 | GIS II | SP | VIS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| • system implementation/integration processes | yes | no | yes | yes | no | no | yes | yes | no | no | no | yes |
| • system promotion to staff | yes | no | yes | yes | no | no | yes | yes | no | no | no | no |
| Technical | | | | | | | | | | | | |
| • installation instructions | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| • localization instructions | yes | no | yes | yes | no | yes | yes | yes | no | no | yes | no |
| • operating instructions | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| • procedures for demonstration | no | no | yes | yes | no | no | no | no | no | no | no | no |
| • technical service request procedures | yes | no | no | no | yes | no | yes | yes | no | no | yes | yes |
| • trouble shooting | yes | yes | yes | yes | yes | no | no | no | yes | yes | yes | no |
| Newsletter | | | | | | | | | | | | |
| Information/updates | no | yes | yes | yes | no | yes | yes | yes | yes | yes | yes | yes |
| Research & development | no | yes | yes | yes | no | yes | yes | yes | yes | yes | yes | yes |
| Videotape | | | | | | | | | | | | |
| Publication date | no | no | 1992 | 1992 | no | no | 1990 [4] | 1990 | 1991 | 1993 | 1992 | no |
| Assessment inventories | no | no | no | no | no | no | yes | yes | no | no | no | no |
| Career stages/development | no | no | yes | yes | no | no | no | no | no | no | no | no |
| Content overview | no | no | yes [5] | yes | no | no | yes | yes | yes | yes | yes | no |
| Counseling scenarios | no | no | yes | yes | no | no | yes | yes | yes | yes | yes | no |
| Counselor training | no | no | yes | yes | no | no | yes | yes | yes | yes | yes | no |
| Daily operating procedures | no | no | yes | yes | no | no | yes | yes | no | no | no | no |
| Database/development procedures | | | | | | | | | | | | |
| • information update cycle | no | no | yes | yes | no | no | no | no | yes | yes | no | no |
| • educational information sources | no | no | yes | yes | no | no | no | no | no | no | no | no |
| • financial aid sources | no | no | yes | yes | no | no | no | no | no | no | no | no |
| • occupational information sources | no | no | yes | yes | no | no | no | no | no | no | no | no |
| Demonstration of installation procedures | no | no | no | no | no | no | yes | yes | no | no | no | no |
| Integrating of software into counseling services | no | no | yes | yes | no | no | yes | yes | yes | yes | yes | no |
| Localization procedures | no | no | yes | yes | no | no | yes | yes | no | no | no | no |
| Potential settings for system use | no | no | yes | yes | no | no | yes | yes | no | no | no | no |

**Table 3: Comparison of Support Materials and Services Available from Developers**

| Support Materials & Services | CIS | CV | CH | CHCT | CLECT | COIN | DCA | DHS | GIS 17 | GIS II | SP | VIS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Review of support materials/guides | no | no | yes | yes | no | no | no | no | no | yes | no | no |
| Simulated computer screens used for system demonstration | no | no | yes | yes | no | no | yes | yes | no | yes | yes | no |
| System promotion for staff/potential users | no | no | yes | yes | no | no | no | no | no | yes | no | no |
| Technical support number | no | no | yes | yes | no | no | yes | yes | yes | yes | no | no |
| Theoretical basis of software | no | no | yes | yes | no | no | yes | yes | no | no | yes | no |
| Using counselor/administrative reports | no | no | yes | yes | no | no | yes | yes | no | no | no | no |
| **Demonstration Resources** | | | | | | | | | | | | |
| Demonstration disk or demonstration video for software evaluation and/or public relations | yes | no | yes | yes | no | yes | yes | yes | yes | yes | yes | no |
| **Counselor/Administrator Reports** | | | | | | | | | | | | |
| Identification of users | no | no | yes | yes | yes | no | yes | yes | no | no | no | no |
| User characteristics | no | no | yes | yes | no | no | yes | yes | no | no | yes | no |
| Use of system components | yes | no | yes | yes | yes | no | yes | yes | yes | yes | yes | yes |
| User evaluation of the system | no | no | no | no | no | no | yes | yes | no | no | yes | yes |
| Total profile of system use by component/module | yes | no | yes | yes | yes | no | yes | yes | no | no | yes | no |
| **Technical Support for Institutions** | | | | | | | | | | | | |
| By phone | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes |
| **Training from the Developer** | | | | | | | | | | | | |
| On-site training | yes [6] | yes | yes | yes | no | yes | yes | yes | yes | yes | yes | yes |
| National/regional/state conferences | yes | yes | yes | yes | no | yes | yes | yes | yes | yes | yes | yes |

**Table 3: Comparison of Support Materials and Services Available from Developers**

**Note:** (1) Features receiving a "yes" for Choices and Choices CT can be printed from the on-line version of the professional manual. A printed version is available upon request.

**Note:** (2) College Explorer only.

**Note:** (3) Dates may indicate supplemental revisions as opposed to complete manual revision.

**Note:** (4) 1990 video deals with DISCOVER content screen by screen; 1988 video- Installation and Operation; 1986 video- Theoretical Basis for Modules and System. Features receiving a "yes" in this category vary among the three videos. Please check with developers.

**Note:** (5) For Choices and Choices CT videotape, content overview is color-coded to differentiate IBM and Macintosh computer systems.

**Note:** (6) Training varies by state.

**Table 4: Comparison of Costs**

| Feature | CIS | CV | CH | CHCT | CLECT | COIN | DCA | DHS | GIS 17 | GIS II | SP | VIS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Software License** (1 year) | | | | | | | | | | | | |
| System [1] | 850 [2] | 1000 [3] | 1150 [4] | 1350 [5] | 900 [6] | 995 [7] | 1850 [8] | 1850 [9] | 1095 [10] | 1095 [11] | 1475 [12] | 450 [13] |
| **Support Materials** | | | | | | | | | | | | |
| Consumable (assumes 500 users per year) [14] | | | | | | | | | | | | |
| • user guide | nc [15] | na [16] | 355 [17] | 355 [18] | nc | nc | na | na | na | na | nc | na |
| • Harrington-O'Shea CDM | na | na | na | na | na | na | na | na | 759 [19] | 759 [20] | na | na |
| • temperament survey | na | na | na | na | 372 [21] | na | na | na | na | na | na | na |
| **Technical Support** | 800# | 800# | 800# | 800# | 800# | 800# | 800# | 800# | 800# | 800# | 800# | 800# |
| **Training from the Developer** | | | | | | | | | | | | |
| National/regional conference/workshop registration fee [22] | nc | nc | nc | nc | na | nc | nc | nc | nc | nc | $25 | nc |
| **SUB-TOTAL COSTS** | | | | | | | | | | | | |
| One year software license | $850 | $1,000 | $1,150 | $1,350 | $900 | $995 | $1,850 | $1,850 | $1,095 | $1,095 | $1,475 | $450 |
| Optional costs without constants | | | | | | | | | | | | |
| • support materials [23] | $0 | $0 | $355 | $355 | $350 | $0 | $0 | $0 | $759 | $759 | $0 | $0 |
| • conference registration fees [24] | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $25 | $0 |
| subtotal | $0 | $0 | $355 | $355 | $350 | $0 | $0 | $0 | $759 | $759 | $25 | $0 |
| **TOTAL COSTS** | $850 | $1,000 | $1,505 | $1,705 | $1,250 | $995 | $1,850 | $1,850 | $1,854 | $1,854 | $1,500 | $450 |

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**Table 4: Comparison of Costs**

**Note:** (1) Some costs are constant across all systems, such as hardware and hardware maintenance; supplemental career information resources; supplies (paper & printer supplies); facilities (physical renovation and computer furniture, if necessary); staff time necessary for developing and inputting local occupational, educational and service delivery information, and developing organization-specific support materials; and conference travel expenses related to staff training. Appropriate constant costs should be included in any calculation of total CACG expenses for an organization. Only features where costs apply are included in this table. Refer to Table 3 for a complete listing of all support materials and services that are available from the developers.

**Note:** (2) Average estimated cost per site for CIS states. This excludes the cost of the optional High School Curriculum Planner.

**Note:** (3) Unlimited site license within one institution. Volume and state discounts are available. Negotiated lower prices for large multi-site contracts are possible. No additional costs for networks.

**Note:** (4) Unlimited site license within one institution. $985 annually for three year license. Volume and state discounts are available. Negotiated lower prices for large multi-site contracts are possible.

**Note:** (5) $1100 annually for three year license. Volume and state discounts are available. Unlimited site license within one institution. Negotiated lower prices for large multi-site contracts are possible.

**Note:** (6) CLECT is purchased as opposed to being leased. Selected modules may be purchased as follows: Occupational Search Module = $200; Occupational Information Module = $250; College Module = $200; Vocational School Module = $200; Financial Aid Module = $200. Modules 1 and 2 must be of the same edition to function properly. Volume discounts are available.

**Note:** (7) Unlimited site license within one institution. Discounts may be available for states and multi-site contracts. Includes the cost of the CASHE system.

**Note:** (8) Second system at one site = $1150; third system at one site = $600; additional systems - no fee. Single copies of user and system support materials provided with system lease. Additional copies available at extra cost from the developer or by user reproduction. Discounts available for institutions with 300 or fewer students.

**Note:** (9) Second system at one site = $1150; third system at one site = $600; additional systems - no fee. Single copies of user and system support materials provided with system lease. Additional copies available at extra cost from the developer or by user reproduction. Discounts available for schools with 300 or fewer students.

**Note:** (10) Unlimited site license within one institution. Volume and state discounts are available. No additional costs for networks. One state vocational file provided at no charge. Optional state vocational files = $24 each. A 3% shipping and handling cost will be added to the license fee.

**Note:** (11) Unlimited site license within one institution. Volume and state discounts are available. No additional costs for networks. One state vocational charge provided at no charge. Optional state vocational files = $24 each. A 3% shipping and handling cost will be added to the license fee.

**Table 4: Comparison of Costs**

**Note:** (12) 2 year lease = $1275, 3 year lease = $1175; each additional system = $875 per year. Volume discounts and network site license discounts are available.

**Note:** (13) State discounts are available.

**Note:** (14) These costs tend to be ongoing each year and vary with the number of users. This analysis assumes 500 users per year.

**Note:** (15) nc = No charge.

**Note:** (16) na = Not available from the developer at this time.

**Note:** (17) Includes 500 Choices profiles at $25 per 50 = $250 plus 90 reusable Choices Guides at $35 per 30 = $105 for both Choices and Choices CT. This assumes that 90 Guides are necessary to effectively use 500 profiles.

**Note:** (18) See previous footnote.

**Note:** (19) Optional cost. Harrington-O'Shea CDM software ($399); Interpretive folder ($360 - $18 per 25 copies).

**Note:** (20) Optional cost. Harrington-O'Shea CDM software ($399); Interpretive folder ($360 - $18 per 25 copies).

**Note:** (21) Optional cost ($21.90 per 30 copies). First 30 copies provided free of charge.

**Note:** (22) Optional cost (where fees apply) for one person to attend a conference/workshop.

**Note:** (23) These costs tend to be ongoing each year and vary with the number of users (this analysis assumes 500 users/year).

**Note:** (24) These costs tend to vary according to the number of staff being trained, staff turnover, and the need for updated training due to major changes in software design.

**Table 5: Comparison of System Content (Jr. High/Middle School)**

| System Content | CHJr | CLECTJR | COINJr | DJH | VISIONS |
|---|---|---|---|---|---|
| **Introduction** | | | | | |
| Orientation to function keys [1] | no | no | no | yes | yes |
| Overview of system content | yes | no | no | yes | yes |
| Orientation/Exploration of world of work | yes | no | no | yes | yes |
| **Assessment** | | | | | |
| Capacity to complete paper-and-pencil version of on-line assessment prior to computer use [2] | yes | yes | no | yes | yes |
| Capacity to input scores from paper-and-pencil administration of standardized instruments [3] | | | | | |
| • ACT Career Planning Program | no | no | no | yes | yes |
| • California Achievement Tests | no | no | no | yes | yes |
| • Harrington O'Shea CDM | no | no | no | yes | yes |
| • Career Occupational Preference Survey | no | no | no | yes | yes |
| • Comprehensive Tests of Basic Skills | no | no | no | yes | yes |
| • Iowa Tests of Basic Skills | no | no | no | yes | yes |
| • Metropolitan Achievement Test | no | no | no | yes | yes |
| • SRA Achievement Test | no | no | no | yes | yes |
| • Stanford Achievement Test | no | no | no | yes | yes |
| **Identifying Occupational Alternatives** | | | | | |
| Capacity to select specific variables for identifying occupational alternatives | | | | | |
| • abilities/skills/activities | yes | no | no | yes | yes |
| • apprenticeship programs | no | no | yes | no | no |
| • aptitudes | no | no | no | yes | yes |
| • base occupation | no | no | yes | no | no |
| • career clusters/fields | yes | no | yes | yes | yes |
| • education and training | yes | yes [4] | yes | yes | yes |
| • grades/test scores | no | no | no | yes | yes |
| • high school classes | yes | no | yes | no | no |
| • interests/fields of knowledge | yes | yes | no | yes | yes |
| • temperaments | no | yes | no | no | no |
| **Obtaining Occupational Information** | | | | | |
| Capacity to access occupational titles alphabetically without inputting code numbers [5] | yes | no | yes | no | no |
| Multiple sources used to develop occupational information | yes | no | yes | yes | yes |
| Cycle for updating of salary and employment outlook data (in months) | var [6] | 48 | var | annual | annual |

**Table 5: Comparison of System Content (Jr. High/Middle School)**

| System Content | CHJr | CLECTJR | COINJr | DJH | VISIONS |
|---|---|---|---|---|---|
| Cycle for updating all other occupational information (in months) | var | 48 | 12 | 36 | 12 |
| Information provided: | | | | | |
| • categorical information | | | | | |
| • DOT code | no | no | yes | no | no |
| • OES code | no | no | yes | no | no |
| • SOC number/fields of work | no | no | yes | no | no |
| • Holland Code | no | no | yes | no | no |
| • World-of-Work map affiliation/data-people-things-ideas clusters | no | no | yes | yes | yes |
| • advancement/promotion opportunities | no | no | yes | no | no |
| • aptitudes required | yes | no | yes | no | no |
| • career ladder | no | no | yes | no | no |
| • employment outlook | no | no | yes | no | yes |
| • educational requirements | yes | no | yes | yes | no |
| • fringe benefits | no | no | yes | no | no |
| • interest fields/likes-dislikes | yes | no | yes | no | no |
| • methods for entry | no | no | yes | no | no |
| • necessary tools & equipment | no | no | yes | no | no |
| • opportunities for experience | no | no | yes | no | no |
| • other requirements: experience/licensing/certification | no | no | yes | no | no |
| • personal qualities/temperaments | yes | no | yes | no | no |
| • physical demands/strength | yes | no | yes | no | no |
| • related information | | | | | no |
| • apprenticeship programs | no | no | yes | no | no |
| • educational majors/programs | no | no | yes | yes | yes |
| • military occupations | no | yes | yes | no | no |
| • occupations/specialties | no | no | yes | no | no |
| • salary | | | | | no |
| • average | no | no | yes | no | no |
| • beginning | yes | no | yes | no | yes |
| • range | yes | no | yes | yes | no |
| • top | yes | no | yes | no | no |
| • skills required | yes | no | yes | no | no |
| • suggested high school courses/programs | yes | no | yes | yes | yes |
| • training pathways/specific occupational training | no | no | yes | no | yes |
| • where to find more information | no | no | yes | no | no |
| • work tasks/activities | yes | no | yes | yes | yes |
| • work setting/environment/special conditions | yes | no | yes | no | yes |
| Number of occupations included | 252 [7] | 700+ | 341 | 497 | 497 |
| Number of related job titles | 3500 | 2100+ | 1300 | 0 | 0 |
| **Educational Planning** | | | | | |
| Capacity to link high school courses to related occupations | yes | no | yes | yes | yes |

**Table 5: Comparison of System Content (Jr. High/Middle School)**

| System Content | CHJr | CLECTJR | COINJr | DJH | VISIONS |
|---|---|---|---|---|---|
| Capacity to plan a high school curriculum on the basis of educational & career goals [8] | no | no | no | yes | yes |
| Comparison of grades to job cluster requirements | no | no | no | yes | yes |
| Development of an educational action plan | no | no | yes | yes | yes |
| Outline of courses required for graduation | no | no | no | yes | yes |
| **Decision Making** | | | | | |
| On-line description of a career decision-making model | yes | no | no | yes | no |
| **User Exit** | | | | | |
| Completing a brief on-line anonymous evaluation questionnaire (optional) | no | no | no | yes | yes |
| **Local Data Option** | | | | | |
| Capacity to integrate local data into the system | no | no | no | yes | yes |

**Table 5: Comparison of System Content (Jr. High/Middle School)**

**Note:** (1) CACG abbreviations include:

CHJr = Choices for Junior High and Middle Schools (Careerware-ISM Systems Corporation, 1992); CLECTJR = CLECT JR (Chronicle Guidance Publications, Inc., 1993); COINJR = COIN for Junior High and Middle Schools (COIN Educational Programs, 1992); DJH = DISCOVER for Junior High & Middle Schools (American College Testing Program, 1992); and VISIONS = VISIONS for Middle Schools (American College Testing Program, 1992).

**Note:** (2) Potentially reduces the amount of time the user spends at the computer.

**Note:** (3) The user completes a paper-and-pencil administration of a standardized instrument prior to computer use.

**Note:** (4) Entry of off-line assessment results required in order to search by education and training, interests, and temperament variables.

**Note:** (5) Some information provided by VISIONS is Maryland-specific.

**Note:** (6) var = Variable schedule for information updating depending on when total software revisions are completed (approximately every 1 to 3 years).

**Note:** (7) Occupational clusters

**Note:** (8) Requires local data entry

**Table 6: Comparison of User Friendly Features (Jr. High/Middle School)**

| User Friendly Features | CHJr | CLECTJR | COINJr | DJH | VISIONS |
|---|---|---|---|---|---|
| Analogous color scheme video displays [1] | yes | no | yes | yes | yes |
| Multi-colored graphic enhanced screen displays | yes | no | yes | yes | yes |
| System content color-coded [2] | no | no | yes | no | no |
| Sound effects | yes | no | no | yes | yes |
| Upper/lower case characters | yes | no | yes | yes | yes |
| Special purpose function/alt keys | | | | | |
| • back-up function | Esc [3] | yes | yes | yes | yes |
| • locate position in the system | no | no | no | yes | yes |
| • previous item back-up (on-line assessment instruments only) | no | no | no | yes | yes |
| • print screen | no | yes | yes | yes | yes |
| • quick exit | Esc | no | yes | yes | yes |
| • repeat instructions/help | no | no | yes | yes | yes |
| Menu driven screen sequencing | yes | no | yes | yes | yes |
| Main menu indicates completed components/modules | no | no | no | yes | yes |
| Preliminary operating instructions | yes | no | no | yes | yes |
| Prompting for user input | yes | yes | yes | yes | yes |
| User controlled access to system content | yes | yes | yes | yes | yes |
| User data maintenance capabilities | | | | | |
| • user data delete option | no | no | no | yes | yes |
| • password protection for user data | no | no | no | yes [4] | yes |
| Data collection for accountability and research | | | | | |
| • data on system use | | | | | |
| • aggregate | no | no | no | yes | yes |
| • individual | no | no | no | yes | yes |
| • demographic data | | | | | |
| • aggregate | no | no | no | yes | yes |
| • individual | no | no | no | yes | yes |
| • user satisfaction data | no | no | no | yes | yes |
| Introductory instruction omitted for experienced users | yes | no | no | yes | yes |
| Purpose of each component/module explained | yes | no | no | yes | yes |
| Summary screen display/printout for each component/module | no | no | no | yes | yes |
| User memory record (system capability to store user data between sessions) | no | no | no | yes | yes |
| component/module into another component/module | no | no | no | yes | yes |
| Apple version available | yes | yes | yes | yes | yes |
| Macintosh version available | yes | no | yes | no | no |
| Conversation summary supplied | yes | no | no | no | no |
| Name added to printout | yes | no | no | no | yes |

**Table 6: Comparison of User Friendly Features (Jr. High/Middle School)**

**Note:** (1) Assumes United States software versions on IBM compatible microcomputers unless otherwise noted. Response time after data input varies among computers depending on type of processor, clock speed, memory available, and hard disk access speed. Video display (monitor) screen resolution (sharpness) varies with different monitors and display interfaces, with Super VGA, VGA, EGA formats providing better resolution that CGA formats.

**Note:** (2) Color coding of instruction/error messages and display backgrounds to match system content.

**Note:** (3) Esc = Escape (Esc) key provides this function.

**Note:** (4) Uses private number or social security number in place of password.

**Table 7: Comparison of Support Materials and Services Available from Developers (Jr. High/Middle School)**

| Support Materials and Services | CHJr | CLECTJR | COINJr | DJH | VISIONS |
|---|---|---|---|---|---|
| **Support Materials for Users** | | | | | |
| Nonconsumable materials | | | | | |
| • user guide/handbook | yes | yes [1] | no | yes | yes |
| • list of occupations | | | | | |
| • ACT cluster | no | no | no | yes | yes |
| • alphabetical | yes | yes | no | yes | yes |
| • career fields/occ. groups | yes | no | no | yes | yes |
| • similar occupations | yes | yes | no | no | no |
| • list of high school courses by job clusters | no | no | no | yes | no |
| • poster - World-of-Work map | no | no | no | yes | yes |
| • quick reference card for function keys | no | no | no | yes | yes |
| • tutorial | yes | no | no | no | no |
| Consumable materials | | | | | |
| • user guide/handbook | yes | yes | yes | yes | yes |
| • activity checklist | yes | yes | yes | no | no |
| • workbook (assessment and action planning) | no | yes | yes | yes | yes |
| **Support Materials for Institutions** | | | | | |
| Manual | | | | | |
| Publication date | 1992 | 1992 | no date | 1991 | 1993 |
| Professional/paraprofessional | | | | | |
| • administrative/research reports | yes | no | no | yes | yes |
| • counseling steps | no | no | no | yes | yes |
| • important phone numbers | yes | yes | yes | yes | yes |
| • instructions for providing feedback to developers | yes | no | no | no | no |
| • list of occupations | | | | | |
| • alphabetical order | yes | yes | no | yes | yes |
| • career fields/occ. groups | yes | no | no | yes | yes |
| • most common occupations | no | no | no | no | no |
| • similar occupations | yes | yes | no | no | no |
| • related to high school courses | no | no | no | yes | no |
| • related to levels of required education | no | no | no | yes | yes |
| • pilot test data | no | no | no | yes | yes |
| • recommendations for integrating the software into service delivery | yes | no | no | yes | yes |
| • system design process & assumptions | yes | yes | no | yes | yes |
| • system overview | | | | | |
| • component/module overview | yes | yes | yes | yes | yes |
| • user needs & system use options | yes | no | no | no | no |
| • using the printout in counseling | no | no | no | yes | yes |

**Table 7: Comparison of Support Materials and Services Available from Developers (Jr. High/Middle School)**

| Support Materials and Services | CHJr | CLECTJR | COINJr | DJH | VISIONS |
|---|---|---|---|---|---|
| Site administrator | | | | | |
| • choosing the best location | no | no | no | yes | yes |
| | | | | | |
| Technical | | | | | |
| • installation instructions | yes | yes | yes | yes | yes |
| • localization instructions | no | no | no | yes | yes |
| • operating instructions | yes | yes | yes | yes | yes |
| • references | no | no | no | yes | yes |
| • trouble shooting | yes | no | no | yes | yes |
| | | | | | |
| Newsletter | | | | | |
| Information/updates | yes | yes | yes | yes | yes |
| Research & development | yes | no | yes | yes | yes |
| | | | | | |
| Videotape | | | | | |
| Counselor training videotape | no | no | no | yes | no |
| System installation videotape | no | no | no | yes | no |
| | | | | | |
| **Demonstration Resources** | | | | | |
| | | | | | |
| Demonstration disk or demonstration video for software evaluation and/or public relations | yes | no | yes | yes | yes |
| | | | | | |
| **Counselor/Administrator Reports** | | | | | |
| | | | | | |
| Identification of users | no | no | no | yes | yes |
| User characteristics | no | no | no | yes | yes |
| • List of students and tentative occupational choice (occupations explored) | no | no | no | yes | yes |
| • List of occupations/clusters and students selecting them | no | no | no | yes | yes |
| • List of programs of study/courses and students selecting them | no | no | no | yes | yes |
| Use of system components | no | no | no | yes | yes |
| User evaluation of the system | no | no | no | yes | yes |
| Total profile of system use | no | no | no | yes | yes |
| | | | | | |
| Letter to parents (customized for each user) | no | no | no | yes | yes |
| | | | | | |
| **Technical Support for Institutions** | | | | | |
| By phone | yes | yes | yes | yes | yes |
| | | | | | |
| **Training from the Developer** | | | | | |
| | | | | | |
| On-site training | yes | no | yes | yes | yes |
| National/regional/state conferences | yes | no | yes | yes | yes |

**Table 7: Comparison of Support Materials and Services Available from Developers (Jr. High/Middle School)**

**Note:** (1) Information contained in the Career Profile Guide in lieu of presenting information in the system.

**Table 8: Comparison of Costs (Jr. High/Middle School)**

| Feature | CHJr | CLECTJR | COINJr | DJH | VISIONS |
|---|---|---|---|---|---|
| **Software Purchase** | | | | | |
| System [1] | $395 [2] | $200 [3] | $249 [4] | $600 [5] | $250 [6] |
| **Support Materials** | | | | | |
| Consumable (assumes 500 users per year) [7] | | | | | |
| • activity checklist | $106 [8] | na [9] | na | na | na |
| • workbook (assessment & action planning) | na | 447 [10] | 477 [11] | na | nc [12] |
| **Technical Support** | 800# | 800# | 800# | 800# | 800# |
| **Training from the Developer** | | | | | |
| National/regional conference/workshop registration fee [13] | nc | nc | nc | nc | nc |
| **SUB-TOTAL COSTS** | | | | | |
| Software purchase | $395 | $200 | $249 | $600 | $250 |
| Optional costs without constants | | | | | |
| • support materials [14] | $106 | $447 | $477 | $0 | $0 |
| • conference registration fees [15] | $0 | $0 | $0 | $0 | $0 |
| subtotal | $106 | $447 | $477 | $0 | $0 |
| **TOTAL COSTS** | $501 | $647 | $726 | $600 | $250 |

**Table 8: Comparison of Costs (Jr. High/Middle School)**

**Note:** (1) Some costs are constant across all systems, such as hardware, and hardware maintenance; supplemental career information resources; supplies (paper & printer supplies); facilities (physical renovation and computer furniture, if necessary); staff time necessary for developing and inputting local occupational, educational, and service delivery information, and developing organization-specific support materials; and conference travel expenses reltaed to staff training. Appropriate constant costs should be included in any calculation of total CACG expenses for an organization. Only features where costs apply are included in this table. Refer to Table 7 for a complete listing of all support materials and services that are available from the developers.

**Note:** (2) One time cost (no annual software updates). Unlimited site license within one institution. Discounts are available for software upgrades which occur approximately every 2 to 3 years.

**Note:** (3) One time cost (no annual updates). Unlimited site license within one institution.

**Note:** (4) One time cost (no annual software updates). Unlimited site license within one institution. Discounts are available for software upgrades which occur approximately every 2 to 3 years. Networking price = $299.

**Note:** (5) One time cost (no annual software updates.) Unlimited site license for one institution = $900. Single copies of user and system supply materials provided with system lease. Additional copies available at extra cost from developers or by user reproduction. Multiple school district license = $550 per school.

**Note:** (6) Annual cost.

**Note:** (7) These costs tend to be ongoing each year and vary with the number of users (this analysis assumes 500 users/year).

**Note:** (8) Optional cost ($25 per 100 copies, over 500 ordered = $21.20 per 100)

**Note:** (9) na = Not available from the developer at present.

**Note:** (10) Optional CLECT JR workbook = 95 each, with the first 30 copies at no charge. Volume discounts provided.

**Note:** (11) Optional cost for Career Exploration and Planning Guide = $1.95 per copy. Software is provided at no cost with the purchase of 200 planning guides.

**Note:** (12) nc = No charge

**Note:** (13) Optional cost (where fees apply) for one person to attend conference/workshop.

**Note:** (14) These costs tend to be ongoing each year and vary with the number of users (this analysis assumes 500 users per year).

**Note:** (15) These costs tend to vary according to the number of staff being trained, staff turnover, and the need for updated training due to major changes in the software design.

Table 9

Availability of State-Specific Occupational Information in CACG Systems[1]

| Software | State/Territory/City[2] |
|---|---|
| Choices and Choices CT[3] | Arizona<br>California<br>Colorado<br>District of Columbia<br>Guam •[4]<br>Florida •<br>Indiana •<br>Iowa •<br>Kansas<br>Louisiana •<br>Maine •<br>Mississippi •<br>Missouri •[5]<br>New Hampshire<br>New York<br>North Dakota •<br>Northern Mariana Islands •<br>Pennsylvania •<br>South Dakota<br>Utah •<br>Vermont •<br>Wyoming |
| Career Information System (CIS) | Alaska •<br>California<br>Colorado •<br>Georgia •<br>Hawaii •<br>Idaho •<br>Illinois •<br>Minnesota •<br>Montana •<br>Nebraska •<br>Nevada •<br>New York (City)<br>Ohio •<br>Oregon • |

[1] Current as of July 1994

[2] California, Connecticut, New Hampshire, Massachusetts, New York, Texas, West Virginia, and the Virgin Islands have one or more computer-assisted career guidance systems in operation, but the State Occupational Information Coordinating Committee (SOICC) has not designated any as the official state-wide computer-based career information delivery systems (CIDS).

[3] Choices Jr has received SOICC recognition in Alabama, Guam, Florida, Indiana, Iowa, Louisiana, Maine, Mississippi, North Dakota, Norther Mariana Islands, Rhode Island, Utah, and Vermont.

[4] An asterisk (•) indicates official SOICC designation as a computer-based CIDS.

[5] Missouri Choices is based on Choices CT and is administered by the Missouri SOICC.

| Software | State/Territory/City |
|---|---|
| Career Visions | Texas<br>Wisconsin * |
| COIN | California<br>Indiana<br>Missouri[6]<br>Ohio<br>Oklahoma *<br>Pennsylvania<br>South Carolina *<br>Texas |
| DISCOVER for Colleges and Adults and DISCOVER for High Schools | Texas |
| GUIDANCE INFORMATION SYSTEM[7] Version 17 and GIS II | Alabama *<br>Delaware *<br>Maine *<br>New Mexico *<br>Rhode Island * |
| VISIONS Plus | Maryland * |
| State-specific systems[8] | Arizona *<br>Arkansas *<br>Kentucky *<br>Michigan *<br>New Jersey *<br>Puerto Rico *<br>South Dakota *<br>Tennessee *<br>Virginia *<br>Washington *<br>Wyoming * |

[6] Missouri View is based on COIN and is administered by the Missouri Department of Education.
[7] Data on "Employment Potential" (emerging, established and growing, large and stable, small and stable, declining, and individual talent) is automatically available for each state nationwide. An optional vocational-technical information file for each state is available at extra cost.
[8] Includes computer-based CIDS with software and data that are unique to a particular state/territory, or use computer-based CIDS with software that has been substantially modified from an original system.

Table 10

CACG System Location, Data Base Origin, and Language[1]

| CACG System | Location[2] | Data Base Origin | Language |
|---|---|---|---|
| Career Information System (CIS) | USA (CIDS) | USA State | English |
| Career Visions | USA (CIDS) | USA State | English |
| Choices | Belgium | Belgium | Flemish |
| | | | French |
| | Canada | Canada | English |
| | | Canada | French |
| | France | France | French |
| | Hungary | Hungary | Hungarian |
| | Luxembourg | Belgium | French |
| | Netherlands | Netherlands | Dutch |
| | USA | USA | English |
| | USA (CIDS) | USA | English |
| Choices CT | Canada | Canada | English |
| | | Canada | French |
| | USA | USA | English |
| Choices Jr | Canada | Canada | English |
| | | Canada | French |
| | USA | USA | English |
| Modular C-LECT | USA | USA | English |
| C-LECT Jr. | USA | USA | English |
| COIN | USA | USA | English |
| | USA (CIDS) | USA State | English |
| COIN JR. | USA | USA | English |
| DISCOVER for Colleges and Adults | USA | USA | English |
| DISCOVER for High Schools | Canada[3] | Canada | English |
| | USA | USA | English |

[1] Current as of July 1994

[2] Where appropriate, USA locations are designated as a Career Information Delivery System (see also Table 9) or as a United States military installation. Unless otherwise noted, the system is available on a nation-wide basis. Systems available in multiple countries that use the country-of-origin data base and language are omitted from this table.

[3] Includes assessment components from DISCOVER for Colleges and Adults.

| CACG System | Location | Data Base Origin | Language |
|---|---|---|---|
| DISCOVER Special Ver. | USA (Military) | USA | English |
| DISCOVER for Junior High & Middle Schools | USA | USA | English |
| GUIDANCE INFORMATION SYSTEM Version 17 | USA | USA | English |
| | USA (CIDS) | USA State | English |
| | USA (Military) | USA | English |
| GIS II (GUIDANCE INFORMATION SYSTEM) | English | | |
| | USA (CIDS) | USA State | English |
| | USA (Military) | USA | English |
| SIGI PLUS | USA | USA | English |
| | Australia | Australia | English |
| VISIONS Plus | USA (CIDS) | USA State | English |
| VISIONS (Jr High & Middle Sch) | USA (CIDS) | USA State | English |

Table 11

Addresses and Phone Numbers of Computer-Assisted Career Guidance System Developers

| CACG System | Address and Phone Number |
|---|---|
| Career Information System (CIS) | National Career Information System<br>University of Oregon<br>1177 Pearl Street<br>Eugene, OR 97401-3527<br>(503) 346-3872 |
| Career Visions | Wisconsin Career Information System<br>Center on Education and Work<br>University of Wisconsin-Madison<br>1025 West Johnson Street<br>Madison, WI 53706<br>(800) 442-4612 |
| Choices<br>Choices CT<br>Choices Jr | Careerware: ISM Systems Corp.<br>2220 Walkley Road<br>Ottawa, Ontario K1G 5L2<br>CANADA<br>(800) 267-1544 |
| MODULAR C-LECT<br>C-LECT Jr. | Chronicle Guidance Publications, Inc.<br>66 Aurora Street<br>P.O. Box 1190<br>Moravia, NY 13118-1190<br>(800) 622-7284 |
| COIN<br>COIN JR. | COIN Educational Products<br>3361 Executive Parkway, Suite 302<br>Toledo, OH 43606<br>(800) 274-8515 |
| DISCOVER for Colleges and Adults<br>DISCOVER for High Schools<br>DISCOVER for Junior High & Middle Schools<br>VISIONS Plus<br>VISIONS (Jr High & Middle Sch) | American College Testing Program<br>ACT Educational Technology Center<br>Schilling Plaza South<br>230 Schilling Circle<br>Hunt Valley, MD 21031-1107<br>(800) 645-1992 |
| GUIDANCE INFORMATION SYSTEM Version 17<br>GIS II (Guidance Information System) | Riverside Publishing Company<br>Attention: GIS<br>8420 Bryn Mawr Avenue<br>Chicago, IL 60631<br>(800) 323-9540 |
| SIGI PLUS | Educational Testing Service<br>Center for Occupational and Professional Assessment<br>Princeton, NJ 08541<br>(800) 257-7444 |